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THE CLASSICAL ASSOCIATION AT OXFORD.

THE first regular meeting of the Classical Association of England and Wales, held in the Public Schools at Oxford on May 27th and 28th, went off with *éclat*. The various forms of interest, literary, professional, and social, upon which the success of such a gathering must rest, all contributed to this result. The spacious temple of the Muse of examinations was an ideal place for its reception and its debates, while the attendance at both evinced an appreciation that must have been highly gratifying to the President of Magdalen and Mr. Chr. Cookson, who as Chairman and Secretary of the Oxford Committee, had worked so hard for its entertainment. The private hospitality which in many cases had been arranged for the visitors made them feel that the Association was in a special sense the guest of the University. An attractive conversazione, at which Dr. Monro as Vice-Chancellor and the Master of the Rolls as President of the Association received, and at which many objects of interest to a classical assembly, including the lately discovered 'Oxyrhynchus papyri,' were on view, augured well for the morrow; nor was the augury falsified. The Vice-Chancellor welcomed the Association, the Master of the Rolls expounded its aims and justified its foundation, Prof. G. G. Ramsay,

as President of the Scottish body, robustly championed the common cause, and then the meeting settled down to hear the Treasurer upon 'the place of Greek and Latin in human life.' Of the remarkable discourse with which Mr. Mackail alternately dazzled, enchanted, and tantalized his audience for some three quarters of an hour, no idea can be given here: but before long, we understand, the classical public will have an opportunity of enjoying it for itself. After it was over Admiral Sir C. Bridge gave his evidence with naval directness on the value of a classical training to the professional sailor. The Association then applied itself to business, settled its constitution, elected its officers, fixed the time and place of its next meeting (January 1905 and London respectively), and voted for the appointment of a committee to deal with the spelling and printing of Latin texts. In the afternoon 'the Reform of Classical Teaching in Schools' was treated by Mr. J. W. Headlam with moderation and independence. Mr. A. Sidgwick and Mr. R. C. Gilson next contributed, and other speakers followed. The discussion ranged over a wide field and raised a number of interesting questions, some of which it may be hoped will issue in definite proposals for subsequent meetings.

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R

ON *ILIAS* E 127 *sqq.*

IT is not too much to say that no satisfactory explanation of these lines has yet been offered. The $\delta\chi\lambda\nu\delta\ \eta\ \pi\rho\nu\ \epsilon\pi\eta\epsilon\nu$ still remains a standing puzzle. Discreet commentators like La Roche pass by with a reference to Virgil: others refer desperately to O 668, II 567, etc., but the nature of the allusion is as much of a riddle as the original difficulty. The true solution, it seems to me, is to be found in the explanation of another difficulty in this much discussed $\Delta\iota\mu\eta\delta\nu\delta\ \delta\rho\iota\sigma\tau\epsilon\iota\alpha$.

Diomedes, wounded by Pandaros, prays to Athene for vengeance on his adversary: Athene appears, heals him, but without noticing his prayer for vengeance, and promises her aid in the fight. 'Lo (she says) I have again taken from thine eyes the mist that was aforetime upon them, that thou mayest rightly discern both a god and a man: wherefore now if perchance a god come hither to tempt thee, in no wise do thou fight face to face with immortal gods—with any other of them, but only if the daughter of Zeus, Aphrodite, come into the fight, her shalt thou wound with the sharp bronze.' (E 127-132)

Now where does the idea of 'the mist that was aforetime' upon Diomedes' eyes come from? It is quite unlike anything else in the poem. Of course the gods can prevent men from seeing them if they please; but the fact that they are unseen appears to be due to the will of the god, not to any special disability attaching to mortality. When Athene appears to Diomedes he knows her at once; when she appears to Achilles in A 194 *sqq.* he recognizes her immediately. She appears *only to him* (198): but that is her own choice. Besides Diomedes had not met any god in battle yet: what is the force of the $\pi\rho\iota\nu$?

Let us consider another difficulty. In 311 *sqq.* Aeneas has been brought to his knees by Diomedes. Aphrodite first rescues him in a fold of her robe that none of the $\Delta\alpha\nu\alpha\iota\tau\alpha\chi\pi\omega\lambda\omega\iota$ may strike him. Diomedes attacks Aphrodite 'knowing that she is an unwarlike goddess' (331) and wounds her. In her terror she drops her son, who is then picked up by Apollo and hidden in a dark cloud from the Danaoi. Diomedes after driving Aphrodite from the field turns his attack upon Aeneas and Apollo until the god warns him to desist; he does so in a fright and Aeneas is conveyed from the field in safety.

Now in 129 *sqq.* Diomedes is forbidden by Athene to fight with any god but Aphrodite and in 815 *sqq.* (cf. Z 128 *sqq.*) he assures Athene that he has done her bidding. Most people see a contradiction between these words and the narrative in 432 *sqq.* Robert (*Studien zur Ilias*, p. 184) argues that it is not Apollo, but Aeneas that Diomedes attacks: but ll. 438 and 440 seem decisive against his view.

But there is another important discrepancy in the narrative. Apollo (l. 345) rescues Aeneas in a dark cloud that none of the Danaoi may see him. Yet Diomedes rushes at Aeneas, minded to slay him (432 *sqq.*). Clearly the $\kappa\omega\eta\eta\ \nu\epsilon\phi\delta\eta\eta$ has been a poor covering. It cannot be said that this is covered by Athene's promise in l. 127: there she promises only that he shall be able to distinguish between a man and a god, presumably a god in disguise or unseen by others.

Now there can be little doubt that the narrative of the rescue of Aeneas has reached us in a double recension (cf. Erhardt, *Die Entstehung der Hom. Ged.* p. 67). The repetition of 316, 7 in 345, 6 (a favourite device of a redactor) points this way, as does the inordinate length of the episode 347-431 breaking in on the narrative. The question is, which of the two is the earlier.

I shall try to show that the hypothesis of the rescue by Apollo being the earlier explains more than one difficulty in the narrative.

It is evident that the lines 432-442 are closely modelled upon II 702 *sqq.* In the latter passage Patroklos attacking the walls of Troy is mysteriously driven off by Apollo and, persisting, is warned by the god to desist. Here the situation is similar except for lines 433-5 which state positively that Diomedes recognized Apollo. If we omit these lines (a reason for their insertion will be given later) the parallel between the passages is complete and convincing. Assuming then that the narrative ran 310, 432, 436 *sqq.*, we have a complete episode in which Aeneas is rescued miraculously by Apollo and Diomedes is baffled.

Now if Diomedes and Aeneas meet at all the exigencies of the legend required that Aeneas should get off with his life somehow: but this particular method was felt to be too humiliating to Diomedes, and specially out of place in an $\delta\rho\iota\sigma\tau\epsilon\iota\alpha$. Another version

accordingly is composed. In it Aphrodite, not Apollo, rescues Aeneas, and Diomedes voluntarily abandons his human prey to fly at the divine quarry. He attacks the goddess, wounds her, and drives her from the field, and Apollo is utilized to rescue him in a cloud from the other Danaoi. This version contains 310-431. This new version is now 'vorbereitet' by ll. 129-132, and completed by the insertion of 817-821. Further the author of the new episode, thinking of the mistake Diomedes had been under with regard to Apollo in the older version, inserts 127, 8: the *πρίν* in *ἡ πρὶν ἐπῆνεν* is in the older version. The writer forgets that with his own version there is no longer any *πρίν*; but he is thinking of the Diomedes known up to his time without any miraculous power of discrimination.

(Cf. the *ποτε* of Θ 108, referring to what in our *Iliad* has taken place only the day

before, but is to the author of this line one of the data of the story.)

The old version and the new are now fused—perhaps by the same poet. Lines 433-5 are an attempt to do away with the contradiction between the blind attack on Apollo and Athene's promise that he should be able to recognize a god, and to give some appearance of truth to Diomedes' later assurance to the goddess: but they are only a clumsy attempt, and the contradiction with 435 remains.

This theory seems to explain two difficulties by the one hypothesis. It gives an explanation of l. 127 and furnishes a solution of the contradiction between Diomedes' acts and his words which has not yet been forthcoming.

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BELFAST, January 21, 1904.

NOTES ON AESCHYLUS.

Pers. 638 Dealing with this passage in a paper on Ghost-raising in *C.R.* 1902, p. 56, I quoted among many similar descriptions of magic incantations Lucian i. 465 ἐπίτροχόν τι καὶ ἀσφαλής ἐφθέγγετο . . . παραμυγνύς ἄμα καὶ βαρβαρικά τινα καὶ ἀσημα δύναματα καὶ πολυσύλλαβα, and yet omitted to make the correction βάρβαρ' ἀσαφῆνη for βάρβαρα σαφῆνη. For *ἡ παντάλαν'* ἄχη δαβαώσω; add Ben Jonson *Masque of Queens* and Goethe *Faust* I scene 3.

893 schol. 'Ικάριον κλύδωνα' as Θρήκιον κλύδωνα *O.T.* 197.

1005 schol. γρ. καὶ ἀκρόταν ἔξ οὐ ἔσται ἀπὸ τοῦ ἀκρον. Read γρ. καὶ ἀκρόταν ἔξουσιασται, ἀπὸ τοῦ ἀκρον. The word is used by schol. rec. on *οἰακοστρόφος* *P.V.* 515 and *δεσπότης* *Theb.* 27.

1053 (ἀμ)μεμίξετ' οἵμοι for μεμίξεται μοι?

P.V. 445 αἰὲν ὁς οὐράνιον πόλον. For 'Ατλαντος cf. *Orph. hymn.* i. 28.

580 πέλων may be an interpolation: cf. *Apoll. Rhod.* i. 977, ii. 239.

738 γύποδας in M possibly through glosses τύπους and πόδας on ἵχνος or ἵχνη, as in schol. *Hecub.* 1059, Hesych.

Theb. 55 schol. ἔταξαντο?

109 δοχμολόφων κῦμα γὰρ καχλάζει | περὶ πόλιν would correspond.

151 τλήμονες, συναχμάλωτον?

299 schol.: read 'Αργείοις.
473 schol.: read τῇ Αἰγανπτίων φωνῇ: this, not Αἰγανπτία, is regular.

547 ἡ "ξωθεν . . . μέμψεται: cf. *Ar. Nub.* 1433 μὴ τύπτ'. εἰ δὲ μῆ, σαντόν ποτ' αἰτάσσει. *Eubulus* 14 μὴ παρατίθει . . . ἡ σεαντήν αἰτίω.

624 ἀτιμαστήρα γ' ὃς ἀνδρηλάτην 'or at least banish him,' φυγῇ γοῦν τίσασθαι: cf. 1006, *O.C.* 1306, *Nonn. D.* 40, 68.

788 schol. written on νεόκροτον? The same on νεόκτιστον in Hesych.

Supp. 121 The construction may be ζῶσα γόσις με τιμῶ, ἰηλέμοισιν ἐμπρεπῆ: cf. *Soph. El.* 1187, *Cho.* 11, 17.

171 γαμετᾶν οὐλιονεικῶν? cf. 302. Νεῖκος οὐλόμενον was the epithet used by Empedocles.

249 'In this point only will the theory of a Greek land for your origin harmonise': Callim. *Ep.* ιδ' ὃς τῷ τούνομα συμφέρεται.

327 δοκεῖτ' ἐμοὶ <μὲν> So Eur. *Ion* 644 εἴη δ' ἐμοὶ <μὲν>

568 λειμῶνα χιονόβοσκον, οὐ τ' ἐπέρχεται Τυφῷ μένος ὑδωρ τὸ Νεῖλον νόσοις ἀδικτον 'where the diseaseless water of the Nile proceeds against the power of drought and pestilence': see *Plut. de Is. et Osir.* p. 363 D—364 B, 366 B—367 B, 371 A, 376 F. ὃν τ' ἐπέρχεται Τυφῷ μένος would be no

commendation of the country, and ὅδωρ τὸ Νεῖλον is Aeschylean.

592 τοῦ ἡ?

680 ὑπεράταν?

790 ἄστος ὁπως would do, but ἄστος ὁς is probably an Egyptian error.

901 Μᾶ Γᾶ, Μᾶ Γᾶ, βοῶν φοβερὸν ἀπότρεπε. Instead of βοῶν 'requiritur nomen substantivum quo referatur φοβερόν, id genus qualia sunt ὄναρ, ἄραχνος, ὄφη, ἔχιδνα' Weil. Why not βοῶν, the Latin *boam* or *bovam* (Plin. viii. 36 *sqq.*, Paul. ex Fest. p. 30 Mueller), the *boa constrictor*?

1012 κηρύσσει Κύπρις | εἰς μῶρ' ἀκωλύτους ἀνεφρεγμέν' ἵμερώ | cf. Eur. *Tro.* 983. κωλύνοντο' is exactly contrary to the sense.

Agam. 71 παραθέλξει without τις is strange: παραθέλξει?

219 πατρώντος παρθενοσφάγουσιν | χέρας μαίνων ῥοΐσι πέλας βωμον: the text arising through τὸ ἔχης with ρεέθροις substituted for ροΐσι.

653 πῶς κεδνά τοι κακοῖσι συμμίξω? It is a proverb, Eur. *Ion* 1023.

1181 If πῆμα is the subject (cf. Hom. Ψ 61), perhaps κλίσειν may be right.

1418 Θρηκίων γ' ἀμάτων?

Cho. 154 Punctuate πρὸς ἔρυμα τόδε κακῶν κεδνῶν τ' ἀπότροπον, 'this offering to avert evils (from Clytemnestra's point of view, v. 42) and blessings (from ours)': or perhaps καλῶν κεδνῶν τ' 'to avert (what are not evils, but) blessings.'

245 Ζεῦ Ζεῦ θεωρὸς τῶνδε πρηγμάτων γενοῦ. The singular πρηγμάτων was caused, I suspect, in this way: Archilochus *fragm.* 88 ὁ Ζεῦ, πάτερ Ζεῦ, κτέ. continued thus: καὶ νῦν θεωρὸς τῶνδε πρηγμάτων γενεῖ (cf. Hes. *Op.* 267 πάντα ἴδων *sqq.*), and this the scribe remembered.

284 ὁρῶντα λαμπρόν, ἐν σκότῳ νωμῶντ' ὁφρῦν is, I think, an illustrative quotation on the following line, τὸ γὰρ σκοτεινὸν

316 τύχοιμ' αὖ 'καθεν would account for the MS.

491 πέδαις δ' ἀχαλκεύτοις γ'

835 Perhaps φόνιον ἄταν τίθης (or τιθεῖς), τὸν αἴτιον δ' ἔξαπολλένεις

863 b <καὶ δύματ' ἀνήρ> Mention of the House is required, and a subject to the verb: first comes the vague description ἀνήρ, then the proper name 'Ορέστης follows in the second clause with telling emphasis, a poetical device I have remarked before; e.g. *Supp.* 542-9, *O.C.* 675-9, Pindar and Bacchylides often.

ΔΝ

999 ΤΟΙΟΥΤΟΝΙΚΤΗΣΔΙΤΟ

would account for the MS, i.e. τοιοῦτον εἰ κτήσαιτο with a mistaken ἄν superscribed.

Eum. 213 καὶ παρ' οἰδὲν ἡρκέ τις! cf. 849.

338 θνατῶν τοῖσιν (ορ θνατῶν γ' οῖσιν cf. 350) αὐτοργύαι ἐνυπαγόσιν μάταιοι would be the smallest change. But I cannot find that συμπαγῆναι was ever used to mean *agglutinated to something else*; it always means compact *in itself*, 'congealed,' 'coagulated': and I do not think the meaning could be *qui concretam labem habeant*.

484 πέμπειν ἀμηνίτως τε.

485 φόνων δικαστάς, ὄρκίων αἰδονέοντος <θέμαν as ὄρκίων θέμαν *Agam.* 1432, *I will select, and form> θεσμὸν (a court or institution), τὸν εἰς ἄπαντ' ἐγὰν θήσω χρόνον which I will establish in perpetuity: cf. 617, 686. αἰδονέοντος Frien: cf. 683, 713.*

667 b e.g. <οὐ κοινολέκτροις ἐν γάμοις ἐσπαρμένη> as Coluthus 180 of Athena: ἦν γάμος οὐκ ἐσπειρε καὶ οὐ μαιώσατο μήτηρ.

941 φλοιγμός M probably through φλοισμός. Cf. Heraclitus in *Plut. Mor.* 370 d.

947 If γόνος πλοντόχων means 'earth-produce' generally (Πλοιότων, *Ops*, Δημητηρία, ὀμπνία, πλούτον μητέρα Δημητρα scolian, Hesych. πλούτον, εὐπλούτον κανοῦν, etc.), γόνος <δε τὸς> πλοντόχων would be exactly like *Supp.* 699 and 678, a chorus much resembling this. In each case τὸς, by knitting the sentences together, avoids the monotony of a mere catalogue, and Aeschylus is studious of such variety (cf. *Supp.* 715, *Cho.* 301). As in *Supp.* 699 he says 'May the land yield her due of fruit with produce in all seasons, and thus may their grazing cattle prove prolific,' so here, instead of saying 'and may there also be abundance of treasure-trove,' he would imply it by saying 'and thus (i.e. by their crops and cattle thriving) may there be plenteous produce of the boon Earth to reward the God of Trover's gift' with sacrifices.

There is no error, as has commonly been thought, in *Eum.* 68, 688, *P.V.* 818: in all these passages the construction is never grammatically completed, but designedly allowed to lapse forgotten after parenthetical clauses introduced by relatives. This, too, I take to be the explanation of the superfluous τε in *Agam.* 99 and *Supp.* 490: the sentences begin as though another τε or καὶ were to follow, but it never does, because the clauses intervening are supposed to have

put it out of mind; a parenthesis usurps the place of the main sentence. It is studied carelessness, to resemble the irregularity of actual speech, like the 'nominativus pendens' which Aeschylus is so fond of using.

Frag. 258 καὶ ψευδόδειπνα . . . ἐρρυσιασθοῖς MS. ἐρρυσιάσθη Kaibel: ἐρρυσιάσθην as ἀφγρείθην?

In *Soph. fr.* 234. 7 δεῖλη δὲ πᾶσα τέμνεται βλαστούμενη | καλῶς ὅπωρα no alteration of

βλαστούμενη seems probable, unless it was κλαστούμενη i.e. κλασταζομένη: see Ar. *Eg.* 166 schol. and κλάσις, Phot. κλᾶν ἄμπελον: τὸ τέμνειν.

Soph. *fr.* 612 One may suspect that Sophocles said not πολύκονον Ἀμφιτρίαν but πολυκύμον' Ἀμφιτρίαν, the epithet of the sea in Solon, Empedocles and a fragment in Suidas πολυκύμονος θαλάσσης: cf. Hom. γ 91, μ 60.

W. HEADLAM.

THE PARODOS OF SOPHOCLES' *ANTIGONE*.

THE choral passages of Sophocles particularly in the *Antigone* are distinguished by an elaborate harmonic arrangement of ideas and figures, which however delicately presented or suggested, betrays to careful inspection a highly conscious and almost artificial analysis. In marked contrast hereto, the current interpretations of the parodos of the *Antigone* yield a lack of balance in the ideas, a confusion of the imagery, and an absence of all unity of plan. The belief that all this is the fault of the interpretations and not of the parodos instigates the writing of this paper.

Leaving out of account the final anapaestic system, which heralds the appearance of Creon, the subject matter of the ode proper is set forth in seven stanzas, four strophes (or antistrophes) with three alternating anapaestic systems. The first stanza (i.e. the first strophe) welcomes the beams of the rising sun, dispelling the terrors of the night, bringing peace to the battle-leagured town, —'fairest light that e'er shone on Thebes of the seven gates, at last hast thou appeared. O lid of golden day.' The seventh stanza (i.e. the second antistrophe), brings the echo hereto in the personal embodiment of *Nike* who advances 'smiling to greet Thebe of the many chariots,' appointing men to forget the battle and strife. In the first, the beams of the sun are driving the white-shielded Argive foe 'a headlong fugitive, prodding him on with ever tightening bit.' In the last, *Nike* as counterpart and exponent of the gladsome sun sends the folk of Thebes in festal procession to the temples of their gods. The ηλθε Νίκα repeats the ἀκτὶς ἀελίον μολούσα, as the τῷ πολυναρμάτῳ ἀντιχαρέσσα Θήβᾳ reflects τὸ κάλλιστον ἐπταπτόλῳ φανὲν Θήβᾳ.

Framed between these two stanzas, which

reveal the spiritual attitude of the song and yield the atmosphere of the picture,—which voice the exceeding joy of light out of darkness and of victory out of impending defeat,—stands the body of the ode, the five central stanzas, which tell the story of the battle itself. The battle is presented in its three phases, the onslaught of the foe, the even-matched struggle, the sudden discomfiture and rout of the Argive at the moment when his triumph seemed sure. The story is not told, however, as a continuous narrative, but is fashioned rather as a thrice-told tale. Stanzas two and three tell it all,—onslaught, struggle, and rout,—under the figure of the conflict between the white-winged eagle and the serpent. Then stanzas four and five tell it again, onslaught, struggle, and rout, but under another figure, and introduce the second tale as an explanation or *epexegesis* of the first. Of this *epexegesis* the particle γάρ of line 127 is the symbol. Thereupon again stanza six begins the tale, this time without figure and in the directer language of fact: 'For seven captains at the seven gates arrayed, equals matched against equals,' but again introducing it as *epexegesis* of the preceding with the particle γάρ of line 141. Three times under three forms or figures the onslaught has been set forth, each time with use of an anapaestic system.

The third form of the statement, namely that of stanza six, which as we have seen, reaches at last the plain language of fact, lays its stress on the even matching of strength against strength, man against man; it is 'seven against seven,' 'equal against equal'; yea, with one of the pairs the contest is even matched to the extent of παρὸς ἐνὸς μητρὸς τε μιᾶς, and therefrom arises no issue of victory; with them the battle remains drawn; forever evenly matched

(δικρατεῖς—κοινοῦ—άμφω). For the others there is a decision, as shown by the πάγχαλκα τέλη, the symbols and prizes of victory (cf. Pindar, *Olym.* 11, 67; *Isthm.* 1, 27.) left in the hands of the arbiter Zeus.

Returning now to the first form of the story, that contained in stanzas two and three, I believe there can be no doubt that the imagery suggested by the words is that of a self-consistent picture, namely, the picture of a contest between the eagle representing Argos and the serpent representing Thebes. The Thebans are the δρακοντογενεῖς. The eagle comes from without; flies over to the land. It comes in noisy and defiant onset, shrill screaming (δέέα κλάζων) for, lo, it was from out of the wrangling strifes of Polyneices that it had taken wing. Over the snake as genius of the place and symbol of home, over the roof-trees of Thebes (ὑπέρ μελάθρων) it poises itself, and its blood-thirsting beak yawns before the seven-gated mouth of its prey. But before it could glut its jaws with Theban blood, before Hephaestus could lay his grip on the coronet of towers,¹ it was gone, scared away by the din that Ares raised. That the imagery of metaphor is here, and that it is presented according to a self-consistent picture, there can be no doubt; but it is only a pattern glimmering through the fabric, sketched in golden threads. So we shall find it to be in the second form of the story, though there the pattern is still more dimly sketched.

This second form of the story is presented in stanzas four and five. The parallelism with the first form, i.e. stanzas two and three, is unmistakeable. The onset of the antagonist is loud and defiant; there are the 'boasts of a haughty tongue' (μεγάλης γλώσσης κόμπους), 'the pride of rattling gold' (χρυσοῦ καναχῆς ὑπεροπλίας), the snorting blasts of hostile winds' (ἐπένει ρίπαις ἔχθιστων ἀνέμων). Defeat overwhelms the foe just as he is 'hasting to raise the cry of victory' (νίκην ὄρμῶντ' ἀλαλάσαι). Zeus is here too the arbiter, the supreme βραβεύς, whose will allots defeat and victory. Ηφαίστον (l. 123) returns as the πυρφόρος (l. 135). Ares appears as the helper of Thebes at the crisis; μέγας Ἀρῆς δεξιόστερος at the end of stanza five echoes and exactly parallels the πάραγος Ἀρεός at the end of stanza three. Of the picture of eagle and serpent there is, however, no longer a trace;

¹ We can scarcely avoid the conviction that δυσχείρωμα (l. 126) was coined to echo στεφάνωμα (l. 122); through the din raised by the fighters on the towers the στεφάνωμα became the eagle's δυσχείρωμα (στεφανῶς: χειρῶς), instead of its easy prey.

that having served its purpose, has faded away, and another takes its place. The scene shifts to the stadion and the contest assumes the form of the four-horse chariot race. We can hear the shouts of the charioteer in the lead, the rattle and clank of harnesses and trappings, the snort of the steeds. Already the foremost chariot is making the last turn to the goal βαλβίδων ἐπ' ἄρκων, and its driver is impatient to raise the claiming cry of victory (νίκην ὄρμῶντ' ἀλαλάσαι), when the competing team in which great Ares is the right trace-horse (δεξιόστερος) surges against him and pushing him and his aside (στυφλίζων), hurls him from his car to the earth (ἀντιτίπη δ' ἐπὶ γῆ τέρες ταταλωθεῖς), and scatters all in confusion and ruin (εἰχε δ' ἀλλα τὰ μέν, ἀλλα δ' ἐπ' ἄλλοις ἐπενόμα).

That the effect of the picture lingers on even in the seventh stanza is betrayed by the appearance of Nike advancing with smiles of congratulation to meet the victorious Thebes, Thebe of the many chariots. It is not a Nike like that of Paeonius, which the poet has here in mind, but the type familiar to us from the vase-paintings, the cupid-like Nike who with the fillet as badge of victory in her hand flits down to greet and decorate the victorious charioteer (e.g. Reinach, *Peintures*. Millin Pl. ii, 60; ii, 72, cf. also Millin i, 43, 45 and Baumeister, *Denkmäler*, Fig. 2137; Panofka, *Cabinet Pourtalès*, Pl. 33, *Arch.-Zeit.* 1867, Pl. 226).

If the interpretation here offered for stanzas four and five may appear from internal evidences possible and even probable, it is raised to what we must consider a demonstrated certainty, as certainty goes in things so human as these, by reference to the full-drawn picture of the four-horse chariot race of the Pythian games, which the same artist has left us for comparison in the pages of the Electra (ll. 696-760). The two passages differ in their character, and especially in their use of scenes and incidents taken from the chariot race, as widely as in their date of composition. One uses the material delicately in suggestive metaphor and as decoration, the other introduces it directly in narration. And yet it appears, if our interpretation of stanzas four and five be correct, that in both similar features and similar incidents dominate the poet's attention as characteristic of the event. There is the shout of the drivers and the clatter of the cars: 'And all with one accord shouted at their horses and shook the reins with both hands; the whole course was filled

with the din of clattering cars.' And there is the snorting of the horses as they come on: 'And all in confused mass plied their goads and spared not, each that he might pass the wheels of his rivals and the snorting of their steeds, for alike at their backs and at their advancing wheels the breath of the horses foamed and cast its spray.' Here too the right trace-horse (*δεξιόστερος*) as *δέξιὸν σειράῖον ἵππον* plays a distinguished part, though mentioned, I believe, nowhere outside of these two passages in all Greek literature. Here too

chariots collide and are scattered in ruin about, 'till the whole arena of Crisa was strewn with the wreck of chariots.' And then at the last and as the supreme incident, just as the foremost driver was making the last turn to the goal with victory all but in his grasp, he is thrown from his car with all the swing of the Antigone's *τανταλωθεῖς* and dashed to the ground (cf. *ἀντεπίπα δ' ἐπὶ γῆ*, *Antigone*, 134).

BENJ. IDE WHEELER.

FURTHER ADVERSARIA UPON THE FRAGMENTS OF SOPHOCLES.

(*The numeration is Nauck's 1889.*)

Sophocles *frag.* 186 :

φιλέι γὰρ ἡ δύσκλεια τοῖς φθονομένοις
τυκάν ἐπ' αἰσχροῖς ἢ π' τοῖς καλοῖς πλέον.

Both sense and construction require
νεικεῖν.

Fr. 256 :

εὐδαίμονες οἱ τότε γέννας
ἀφθίτον λαχόντες τύείν.

For *θείον* I suggest *αἰοῦς* (which became *ΕΟΥΣ*). The genitive *γέννας* is causal with *εὐδαίμονες*.

An original -os- form of *aiών*, parallel to the -on- form, is indicated by (1) the accus. *aiών*, (2) the locative *aiές*. It should also be remembered that *aiών* is sometimes a feminine noun, and the schema *aiών*: *aiώνις* is therefore no more extraordinary than *ἀηδών*: *ἀηδονής*. Both *ἀηδονής* and *εἰκονής* occur only once, and each is in tragedy.

Fr. 365 :

οὗτοι ποθ' τῆξει τῶν ἄκρων ἀνευ πόνου.

Read *οὐτοις τι θέξει* (or rather *θέξῃ*). The error was from uncials and was complicated by itacism. (*ΤΙΘΙΞΗΙ* became *ΠΟΘΙΞΗΙ* and this became *ποθῇ θέξει*.)

Fr. 366 :

ἢν μὲν γὰρ οἰος μαλλός, ἢν τὸ ἀμπέλου
σπονδός.

Read *ἢν ἀπ' ἀπ' ἀμπέλου . . .* (cf. Eupolis *ap.* Ath. 52 D *οἰνόν τε πίνειν Ναξίων* *ἀπ' ἀμπέλων*.)

Fr. 367 :

τοῖς μὲν λόγοις τοῖς σοῦσιν οὐ τεκμαίρομαι,
οὐ μᾶλλον ἢ τλευκῷ λίθῳ λευκῇ στάθμη.†—

Read *ἢ λευκῷ λίθῳ λευκῷ κ.τ.λ.* For the absence of even quasi-caesura see Appendix to Aesch. *Cho.* 150. But I welcome the suggestion of Dr. Postgate that *ἐν* is better placed after *λευκῷ*. The loss was also somewhat easier from that position and the metre is improved.]

Fr. 376 :

ἀμοχθος γὰρ οὐδεῖς, ὁ δ' ἡκιστ'
ἔχων μακάρτατος.

The sense requires

οἱ δ' ἡκιστ'
ἔχων <κακῶς> μακάρτατος.

Fr. 461. 3 :

εἶδον στρατὸν στείχοντα παραλίαν τέπεραν.

So Harpocration, but Athenaeus has *ἄκραν*. Neither word seems very likely in the case of a marching army, and the discrepancy is best explained by assuming *πλάκα* as the common source. Parallel phrases are not very convincing in a simple case like the present, but we may compare the *παράκτιον πλάκα* of Phrynichus *fr. 5*.

Fr. 463 :

κημοῖσι πλεκτοῖς πορφύρας τέφθείρει γένος.

Rather *θηρᾶ*. The schol. on Ar. *Eg.* 1150, who quotes the passage, paraphrases with *λαρβάνονται*, as does Hesychius. The same error occurs in *frag. adesp. 484*.

Fr. 467 :

λόγῳ γὰρ ἔλκος οὐδὲν τοῦ πτυχεῖν (Schol. A. 581).

Otherwise

λόγῳ γὰρ οὐδὲν ἔλκος οἰδά που τχανόν (Suidas).

The latter version represents οἰδά που χάν, where the accent is amiss and was taken to represent the syllable -ov. We are thus brought to a search for the common original ^{οὐ} of πτυχεῖν and πουχάν. This I take to have been π ο ν (or π ω) π τ ν χ ε ν. The line was thus

λόγῳ γὰρ ἔλκος οὐδὲν οἰδά π ο ν π τ ν χ ε ν.
i.e. 'I know of no wound ever having been closed by talk.' Cf. the medical use of πτύμα and πτυκτόν.

[I had written πτυγέν, as being the only form of the simple aorist actually recorded. Dr. Postgate believes that πτυχέν, though not found, is the only form allowable for the classical period, and though I cannot readily admit that the analogical γ-aorist was unlikely to have been created by the fifth century, the emendation is brought so much nearer to certainty by postulating the χ-form that I gladly adopt the modification.]

Fr. 553 :

βρῦτον δὲ τὸν χερσαῖον τὸν θεῖν ~ ~.

I feel tolerably certain that for ο ν δ ν ε ι ν we should read ο ν δ ν σ ι ν, i.e. ο ν δ' δ σ ι ν. This was followed by an adjective, which may have been γλυκύν, less probably φίλον, or very possibly ποτόν (= πότιμον).

[Obiter attention may be drawn to the fragment of Aeschylus (124 Nauck) which is quoted by Athenaeus (447 c) in the same place with this passage, viz.

κάκ τῶν ἔπινε βρῦτον ιοχνάινων τχρόνω,
κάσεμοκόμπει τοῦτ' ἐν ἀνδρείᾳ στέγῃ.

In the former line χρόνω is recognised as meaningless. I suggest λίνω. The muddy beer is strained through λίνον.]

Fr. 618 :

σύγγνωτε κανάσχεσθε σιγώσαι τὸ γὰρ
γνωαξίν αἰσχρὸν τὸν γνωακὶ δεῖ στέγειν.

So Stobaeus S and M, while A gives σὺν γνωακί. The confusion of the two prepositions is frequent, and σύν is probably correct. The error lies in the case of the noun, which has been falsely adapted to the supposed preposition. We have here, I believe, another instance of an idiom which copyists generally obscure. Such idioms are not examples of 'tmesis,' but remnants of the adverbial use of the preposition. In Aesch. Ag. 1599 ἀπὸ σφαγῆς ἐρών and S.c.T. 259 οὐδὲ ἀπ' Ἰσμηροῦ λέγω the accus. has been restored by Auratus and Abresch respectively. So here we should probably read

τὸ γὰρ

γνωαξίν αἰσχρὸν σὺν γνωακὶ δεῖ στέγειν.
i.e. 'a woman should join in concealing . . .'

Fr. 766 : Plutarch *de orac. def.* 414 E has . . πολλὰ καλὰ τὸν θεοῦ διδόντος ἀνθρώποις, ἀθάνατον δὲ μηδέν ὥστε θυγάτκειν καὶ τὰ θεῶν, θεοὺς δὲ οὐ, κατὰ τὸν Σοφοκλέα. Does not this imply the verse

θυγάτκει δὲ καὶ τὰ τῶν θεῶν, θεοὶ δέ γ' οὐ?

Fr. 811 :

δάφνην φαγὸν δδόντι πρὶς τὸ στόμα.

If this were from a satyric play both φαγών and the jerky rhythm might pass muster. But preferable seems

δαφνη φάγα γ φ δ δδόντι πρὶς τω στόμα.

Fr. 818 :

ἐν τοῖσιν ἵπποις τοῖσιν ἐκλελεγμένοις
τοῖσιν εἰ χωρῶμεν η παντὶ σθένει.

For the former line Schneidewin restores σὺν τοῖσιν ἵπποις τοῖσιν ἐκλελεγμένοις.

I would suggest that the passage is a question and that the second line ran

η δη σ φιν ἐγχειρῶμεν η παντὶ σθένει;

T. G. TUCKER.

ON THE FRAGMENTS OF EURIPIDES.

PROF. TUCKER, in his *adversaria* on Eurip. *fr. in Cl. Rev. xviii. 4*, proposes γνώμας παραστῶν, ὥστε Μαγνῆτις λίθος as the right restoration of *fr. 567* (571), 2. I find

I had jotted down in my Nauck, some years ago, 'ι ἐπιστῶν.'

Fr. 360 (362) 3 χρόνω δὲ δρῶσι δυσγενέστερον: here I had conjectured δρῶσιν οἰα δυσ-

γενέστεροι, but Prof. Tucker's *χρόνω δὲ δαρψ* δρῶσι is brilliant, and deserving of acceptance.

I will add only one further note: In fr. 801, vv. 2, 3 should be separated from

v. 1 (as suggested in Nauck), and for διδωσιν ὅστις κ.τ.λ. we should read δημός ἔστιν ὅστις κ.τ.λ.

R. G. BURY.

ON THE PLATONIST DOCTRINE OF THE ἀσύμβλητοι ἀριθμοί.

§ 1. ARISTOTLE *Nic. Eth.* I. vi. and *Metaph.* M. vi.

An interesting article in the February number of the *Classical Review* discusses what is said to be 'a well-known difficulty,' amounting to 'seeming contradiction'¹ between the following passages:—*Nic. Eth.* I. vi. 1096^a 17 οἱ δῆ κομίσαντες τὴν δόξαν ταῦτην οὐκ ἐποίοντις ἰδέας ἐν ὅις τὸ πρότερον καὶ ὑστερὸν ἔλεγον, διόπερ οὐδὲ τῶν ἀριθμῶν ἰδέαν κατεοκέναζον: *Metaph.* M. vi. 1080^b 11 οἱ μὲν οὖν ἀμφοτέρους φασὶν ἔναι τοὺς ἀριθμούς, τὸν μὲν ἔχοντα τὸ πρότερον καὶ ὑστερὸν τὰς ἰδέας, τὸν δὲ μαθηματικὸν παρὰ τὰς ἰδέας καὶ τὰ αἰσθητά, καὶ χωριστοὺς ἀμφοτέρους τῶν αἰσθητῶν. The difficulty, surely, is imaginary, and only due to one of those slips of interpretation sometimes made by distinguished critics in very plain matters. The writer of the article must pardon a fellow-student for thinking that in it the true nature of the mistake has not been made clear, and that—perhaps in consequence—the simplicity of the issue and of its solution have not been realised: further that the interpretation given of the passage from the *Ethics* is not correct, owing to a misunderstanding of the drift of a passage referred to from *Metaph.* B. iv.

The seeming contradiction arose simply from a misinterpretation of the first clause in the passage from the *Ethics*. According to the *Metaphysics*, the Ideal numbers stand in the relation of πρότερον καὶ ὑστερὸν. The words in the *Ethics*, on the other hand, οὐκ ἐποίοντις ἰδέας ἐν ὅις τὸ πρότερον καὶ ὑστερὸν ἔλεγον were taken to mean that there were no 'Ideas' at all² in the case of things

related as πρότερον and ὑστερὸν. This would necessitate that the numbers referred to in the *Metaphysics* as having in them the πρότερον καὶ ὑστερὸν could not be Ideas, and so would contradict the statement in the *Metaphysics* that they were.

But the first clause of the *Ethics* passage means, not that the Platonists allowed no Ideas at all in the sphere of the πρότερον καὶ ὑστερὸν, but that in the case of a group whose members were in this relation, there was no one single Idea to correspond to the group as such. Aristotle uses the plural ἰδέας and not the singular ἰδέαν, because he is thinking of such groups in general. There is no implication that the members of a group of the kind could not be themselves Ideas. And with this the whole difficulty disappears.

The second clause means that the Platonists in consequence of the doctrine ascribed to them in the first clause did not recognise one Idea of the Numbers, as they held the Numbers stood in the relation of πρότερον καὶ ὑστερὸν.

Thus if we had no other passage from the *Metaphysics* except that which was supposed to contradict the *Ethics*, we should by combining the two places arrive at this perfectly coherent result:—The later Platonists held that the Ideal numbers were in the relation of πρότερον καὶ ὑστερὸν to one another (*Met.*). They also held that when the members of a group stood in that relation there was no one Idea corresponding to the group (*Eth.*). Consequently they held that the Ideal numbers had no one Idea of number corresponding to them as a group; *i.e.* there was

dieser Auffassung... die Angabe vereinigen dass Plato und seine Schule von demjenigen in dem das Vor und Nach stattfindet, keine Ideen angenommen haben? Zeller himself, who at first followed Trendelenburg, but eventually realised the essentials of the interpretation of the *Ethics* passage, does not happen to say that the difficulty was merely due to this mistranslation, his attention being taken up with the questions about the meaning of τὸ πρότερον καὶ ὑστερὸν raised by those who misunderstood the *Ethics* text.

¹ Cp. Trendelenburg, *Platonis de ideis et numeris doctrine ex Aristotele illustrata*, p. 80: 'locos duos inter se, ut videtur, repugnantes. Zeller, *Plat. Stud.* p. 243: 'mit welcher Stelle, die ihr widersprechende, etc.'

² Cp. Trend. *l.c.*: 'his inter se collatis, alterum, ideas eum definiri numerum, qui habeat prius et posterius, altero, non ideas factas eorum in quibus sit prius et posterius, prorsus repugnat.' Brandis, *Rhein. Mus.* 2 (1828), p. 563. Zeller, *Phil. d. Gr.*, 3rd ed., II. i. p. 571: 'Wie lässt sich nun aber mit

no 'Idea' corresponding to *ἀριθμός* in general (*Eth.*). There would then be no disagreement, and we need nothing further for the reconciliation of the two passages taken alone.

But there is another passage in the *Metaphysics* itself (999^a 6) which when combined with the above passage from the same treatise gives exactly the same result as the combination of that passage with the *Ethics*.

Met. B iii. 999^a 6 ζτι ἐν οἷς τὸ πρότερον καὶ νότερόν ἔστιν, οὐχ οἷον τε τὸ ἐπὶ τούτων εἶναι τι παρὰ ταῦτα. οἷον εἰ πρώτη τῶν ἀριθμῶν ἡ δύσις, οὐκ ἔσται τις ἀριθμός παρὰ τὰ ἔδη τῶν ἀριθμῶν.¹ According to this if a group of things stand in the relation of *πρότερον καὶ νότερον*, their common predicate (*τὸ ἐπὶ τούτων*) cannot be some common element distinguishable (*παρά*) from them. What this more exactly means will be considered later, for the moment we are only concerned with the application made of it in the context, which is that since the *ἔδη τῶν ἀριθμῶν* stand in the relation of 'prior and posterior,' there is no *ἀριθμός* distinguishable from these *ἔδη*. If the Platonists accepted this sort of reasoning—and we learn from the *Ethics* that they did, then since they held the Ideal numbers stood in such relation, they would necessarily hold that there was no one Idea corresponding to this group as such, *i.e.* that there was no Idea of *ἀριθμός*. Thus the result of the two passages from the *Metaphysics* agrees entirely with the passage from the *Ethics*, and there is not the smallest discrepancy between the two treatises.

The foregoing is all that is relevant to shew the unreality of the supposed difficulty. Nothing turns upon what the exact meaning of *τὸ πρότερον καὶ νότερον* may be, and it is not necessary to enquire, for instance, if it refers to some process of *γένησις*, or even to discuss it at all for the real issue between the passages, however otherwise interesting. Nor is it right to suppose the meaning of the *Ethics* to be that 'the Idealists did not view the higher (logically soluble) *genera* as Ideas.' 'Logically soluble' appears to stand for 'capable of differentiation into species,' so that the meaning would be 'the Idealists allow no Idea except for *infimae species*.' This doctrine is not really contained in the passages before us. All that is ascribed to the Idealists is the doctrine that when species are related to one another as 'prior and posterior' there could be for them no one Idea. Thus for instance, it is not a true inference from *Metaph.* 999^a 6, above

quoted, that 'Αριθμός does not constitute in itself an *ἰδέα* because it is divisible into a variety of *ἔδη*.' The principle stated in this passage is not applied to the Platonic Ideas at all; and if it were, the result would be that there was no *ἰδέα* of *ἀριθμός*, not because *ἀριθμός* was divisible into *ἔδη*, but because its *ἔδη* stand to one another in the relation of *πρότερον καὶ νότερον*. The *ἔδη* meant are the δύσις, τριάς, τετράς, etc., etc., of which the δύσις is prior to the τριάς and all the rest, the τριάς, to the τετράς and all the rest, and so on. The bearing of the whole passage of which 999^a 6-9, is a part will be considered later.¹

§ 2.—*Current views on the ἀσύμβλητοι ἀριθμοί and the doctrine of τὰ μεταξύ.*

We may turn to some questions of somewhat greater difficulty.

What is the true meaning, and what is the origin of the doctrine that the Ideal numbers were *ἀσύμβλητοι*, and of the doctrine associated with it that the objects of mathematics, τὰ μαθηματικά are *μεταξύ*—between the Ideas and the world of sense?

According to the theory of Ideas represented by Plato's writings, there were of course Ideas of number. In a later development of Platonism, of which we hear through Aristotle, all 'Ideas' were somehow identified with Numbers. The Ideas of numbers, *ἰδέαι τῶν ἀριθμῶν*, of the earlier theory, and the Idea-numbers of the later may both be called 'Ideal numbers,' and this general expression has been used in the foregoing for a reason which will appear hereafter.

It is perhaps the generally accepted view that *ἀσύμβλητοι ἀριθμοί* was a designation only applied to the Idea-numbers of the later theory and suited to them alone. It might seem that 'Ideas' would only be called numbers in some metaphorical way, and that the name *ἀριθμοὶ ἀσύμβλητοι* indicated the Idea-numbers had not the properties of true number; for to say they could not be added would be to say that no arithmetical relation was possible between them. Bonitz expressly remarks (Comm. on *Metaph.* p. 540) that the name *ἀσύμβλητοι* shews nothing numerical was really intended:—hos numeros, qui idearum exprimerent naturam a mathematicis ea distinxit ratione, quae reversa ipsam numerorum naturam penitus tolleret. Cp. p. 541 Nimurum quum numeris abstractis illud, ut sint *συμβλητοί*, inde accidat, quod nullum in iis est qualitatis discriminē sed unice quanti-

¹ § 7.

tas diversa, ad idem prorsus redit utrum numeros dixeris *ἀσύμβλήτους* esse an qualitate inter se differre. He thinks the numbers were mere symbols of notions : cp. p. 543 Etenim Plato quod *ἀσύμβλήτους* dixit numeros suos ideales, qualitatis diversitatem, quae in iis cerneretur, significavit et ipsam quantitativam numeri naturam ita sustulit, ut eorum vis non amplius penderet unitatum a multitudine . . . sed numeri modo signa quaedam et quasi symbola fiant notionum. Thus it would be assumed without question that the Ideal numbers of the earlier theory being Ideas of number in the literal sense were not the *ἀριθμοὶ ἀσύμβλητοι*, that these latter belonged to the later theory, and were, of course, but a paradox of Platonism without any value for thought in general.

It must be contended that these views are erroneous. The theory of the *ἀσύμβλητοι* *ἀριθμοὶ* contained an important truth, though it was not appreciated by Aristotle : and it is a theory which, in the nature of the case, belonged essentially to the earlier Platonism, arose out of that and not out of anything peculiar to the later theory.

It seems also to be supposed that the doctrine of the *μαθηματικὸς ἀριθμός*, as something *μεραξύ τοῦ εἰδητικοῦ καὶ τοῦ αἰσθητοῦ* (1090^b 35) was a peculiar adjunct of the later Idea-number theory ; probably because it is thought that as the Idea-numbers did not relate to true numbers at all some place had to be found for true, or mathematical number, and for this *Metaph.* 991^b 26¹ might be appealed to. But the origin of this doctrine again, which cannot be dissociated from the view that geometrical figures were also *μεραξῖ*, lies in conditions which belong not to the later theory but to the earlier, and has nothing whatever to do with the Idea-numbers as such.

§ 3.—*Meaning and origin of the conception of ἀσύμβλητοι ἀριθμοὶ.*

We may consider first the *ἀσύμβλητοι ἀριθμοὶ*.

Plato's *ἰδέα* is of course the Universal. We are not concerned here with what is peculiar to his view of its nature, but with a part of it, which all must accept, and upon which Plato laid great stress : namely, the assertion that the Universal is one—a unity, that is, in contrast with the manifold to which it corresponds. This means that whereas there are many circles, for instance, Circularity, the Universal, is one—there is

¹ This passage is considered below, § 4, paragraph 8.

only one Circularity. It is not necessary to repeat here the familiar *reductio ad absurdum* of the hypothesis that there could be more than one. 'The circle,' with the definite article, is an equivalent expression for circularity, and even if we give several definitions of 'the Circle' we suppose them all definitions of one and the same thing. 'The number Two,' as we call it, is a Universal: it is 'twoness' in general, and there is only one 'twoness.' It is because there is only one that we use the definite article in the expression 'the number Two.' Now 'the number Two' thus accurately understood cannot enter into a process of summation like a particular two. 'Two and two make four' means two things (= a particular two) added to two other things of the same kind amount to four things. The proposition is a universal one because it stands for 'any two things added to any other two things, etc., etc.,' but not because it means an addition of Universals. It does not mean, that is, that twoness added to twoness is fourness. There is only one 'twoness' and thus the expression 'twoness added to twoness' has no sense. This is the same as saying that 'two and two make four' does not mean that 'the number Two' added to 'the number Two' is 'the number Four.' Nor does anyone ever express the proposition in this way. As before, we must say there is only one 'number Two,' and that 'the number Two added to the number Two' is an unmeaning expression. Similarly 'two and three are five' means 'any particular two (i.e. any two things) added to any other particular three, etc.' and does not mean twoness added to threeness is five-ness. The latter is an absurd expression, for, as is easily seen, it would involve more than one twoness, and more than one threeness. Or it may be put thus:—if twoness (= the number Two) could be added to threeness (= the number Three) so as to produce five-ness (= the number Five) twoness must be conceived as having two units added to three units contained in threeness. But such units cannot be particulars as twoness is universal: they must be Universals, and the Universal of units is oneness. Thus twoness would have to consist of oneness added to another oneness which is absurd as there is only one 'oneness.' Thus 'the number Two,' 'the number Three,' etc., that is the universal twoness, the universal threeness, etc., or, in popular language, the abstractions of twoness and threeness, etc. do not consist of units, and are not capable of numerical addition in the same sense as a two and a

three, by the combination of units. And thus if we call them Numbers (we call them 'the Numbers') they are certainly numbers which are not addible.¹ This is exactly the Platonic doctrine; for if the *iδέα* or Universals of number are called *ἀριθμοί* they must be *ἀριθμοί ἀσύμβλητοι*.

Geometry of course affords an exact parallel. Just as the Universals represented by the Numbers cannot enter into arithmetical operation, in the sense explained, so also the Universals represented by the figures cannot have geometrical constructions performed upon them, or be elements in such constructions. 'The Circle' as we have said is a Universal, and *e.g.* just as 'the number Two' cannot be added to 'the number Two,' the Circle cannot intersect the Circle. That is circularity cannot intersect circularity, for there is only one circularity. Accordingly no mathematician would ever think of expressing the proposition 'a circle can intersect another circle in not more than two (real) points' in the form 'the circle can intersect the circle etc.' the absurdity of which would be felt at once. The construction of Eucl. I. 1 is general, and universal in the proper sense, but it is not the construction of the Universal, 'equilateral triangularity,' upon the Universal, 'rectilinearity,' nor the construction of the equilateral triangle upon the straight line or upon 'the given straight line.'

The doctrine then of the *ἀσύμβλητοι ἀριθμοί*, instead of being a mere fantastic product of later Platonism, embodies a truth which depends on nothing peculiar to Platonism. In that philosophy it arises naturally out of the principles involved in that theory of Ideas which is represented in Plato's writings and not out of anything peculiar to the later Idea-number theory.²

¹ About this principle there is no confusion within mathematics proper: indeed no occasion for it arises there. But it is otherwise with what may be called 'reflective mathematics' or 'quasi-philosophic mathematics.' For the attempt to find continuity within number itself (cf. Dedekind) is a mistake which comes from looking on the Numbers as magnitudes, and not realising the truth attained so long ago in Greek philosophy that they are Universals. A parallel mistake would be to treat 'triangularity,' 'squareness,' etc., etc., as figures, misled by the linguistic equivalence to them of 'the Triangle,' 'the Square,' etc.

² As is well known, there are two criticisms in the *Metaphysics* of the Platonic theory of Ideas, one in bk. A, and another in bk. M. The second is a kind of revised and expanded version of the first: in some places it is a mere duplicate, lengthy passages being repeated word for word. It is noteworthy that whereas the version in bk. M has an introduction

When in this latter all Ideas were identified with Ideas of number, as Ideas of numbers they would be still *ἀσύμβλητοι*, and it is exactly on their numerical side and not as mere Ideas that the epithet belongs to them and is relevant. Accordingly when Aristotle attacks the Idea-numbers, he speaks of them as *ἀσύμβλητοι ἀριθμοί*, and while he of course points out the absurdity of identifying with Ideas of number Ideas of things which cannot be mere number, such as Man and Animal, most of his criticisms have nothing to do with this aspect of the Idea-numbers, but relate to their numerical aspect as Ideas of numbers solely, and the other aspect might be altogether non-existent as far as these criticisms are concerned.

From his treatment of the conception of *ἀσύμβλητοι ἀριθμοί* it must be gathered that Aristotle did not appreciate the truth conveyed in it. Possibly the form in which he presents it is a perversion current in the Academy, but if he had recognised the valuable side of it, we should expect him to say so.

His attack turns mainly on the assumption that while the units in one Ideal number could not be added to those of another, this constituting them *ἀσύμβλητοι*, each of them consisted of units which were added together within the number itself. He gives this as if it were but a statement of the Platonists' own view. In his division of possible opinions he gives first the one that the *μονάδες* were all *ἀσύμβλητοι*, but

which may well imply the writer held it not strictly accurate to speak of the Idea-number theory as if due to Plato himself, as was done in the first version—*περὶ δὲ τῶν ἴδεων πρώτων αὐτὴν τὴν κατὰ τὴν ἴδεαν δύον ἐπισκεπτέον, μηδὲν συνάπτοντας πρὸς τὸν τὰν ἀριθμῶν φύσιν, ἀλλ' ὡς ὑπέλαθον ἐξ ἀρχῆς οἱ πρῶτοι τὰς ἴδεας φίσαντες εἰναι* (1078^a 9), later on in the same book the conception of *ἀσύμβλητοι ἀριθμοί* is attributed to Plato. Cf. 1083^b 33, *εἰ δὲ τὸ τὸ ἐν ἀρχῇ, ἀνάγκη μᾶλλον ὅσπερ Πλάτων ἔλεγεν ἔχειν τὰ περὶ τὸν ἀριθμόν, καὶ εἰναι τινα διάδει πρότην καὶ τρίτα καὶ οὐ συμβλητοῖς εἰναι τοὺς ἀριθμοὺς πρὸς ἀλλήλους*. This so far confirms the view which is now put forward. But the important point is the contention that the conception of the *ἀσύμβλητοι ἀριθμοί* even if formulated by those who originated the Idea-number theory depends on the principles of the earlier theory alone.

The impression that the writer of the second version wishes to dissociate the name of Plato from the Idea-number theory, is confirmed by another interesting circumstance. The second version while repeating the greater part of a long passage at the beginning of the first version nearly word for word, omits a little way down in the context that passage in the earlier version which involves the identification of Plato's Idea theory with the Idea-number theory and substitutes for it some different matter.

says expressly that it was an opinion which no one had held.

Now, as has been shewn above, the considerations which make it impossible that a Universal of number, such as 'fourness,' or 'the number Four,' should consist of Universals of number added together—'twoness to twoness' or 'the number Two' to 'the number Two,' make it impossible that any Universal of number, *i.e.* any one of the Numbers, should consist of units added together, for that would involve that there should be more than one universal 'oneness.'

The two thoughts are inseparable; and it is hardly conceivable that the philosopher whose penetration enabled him to appreciate one side of the truth should have failed to see the other. But it is very credible that a conception, so remote from ordinary habits of mind, should be imperfectly understood by disciples.

The alternative, *πάσας τὰς μονάδας είναι ἀσύμβλητος*, which Aristotle says no one maintained, would not in any case represent the true theory: for of course, as we have seen, that no more admits of a plurality of 'oneness' than of 'twoness': that is, just as there is the δύος but not δυάδες in the plural, so there would be the μονάδας but not μονάδες.

Bonitz in a footnote (p. 555) to his commentary on *Met.* M. viii. has remarked that Aristotle's criticisms are not well directed because those who held the theory of ἀσύμβλητος ἀριθμοί would not consider them as each composed of added units. But the objection as Bonitz puts it is mistaken, for it is based upon his view that the ἀσύμβλητος ἀριθμοί were in no sense numbers and had nothing really numerical about them. Thus he supposes that the Platonists could not represent them as composed of units because they did not mean them to be ideas of real number at all. 'Etenim is qui eos numeros, quos pro principiis ponat, ἀσύμβλητος esse dicit, ipsam numerorum naturam manifeste tollit.' Owing to the same mistake he supposes Aristotle's proper course would have been to shew that the conception of ἀριθμὸς ἀσύμβλητος was self-contradictory.

§ 4.—Meaning and origin of the doctrine of τὰ μεταξύ.

Before discussing the meaning of the *πρότερον καὶ ὕστερον* and certain other subjects connected with the Ideal numbers, it will be best for the confirmation of the

view put forward about the ἀσύμβλητος ἀριθμοί to pass to another doctrine of later Platonism, that of τὰ μεταξύ; or the doctrine that the objects of mathematical science were neither Ideas nor particulars of sense, but something between the two; for this may be shewn to be the outcome, though a mistaken one, of the same kind of thinking as that which produced the ἀσύμβλητος ἀριθμοί combined with Plato's theory of the object of scientific knowledge.

The passage of Aristotle which helps most towards ascertaining the real meaning and origin of the conception of τὰ μεταξύ is the following from *Metaph.* A. vi. 987^b 14:—*ἔτι δὲ παρὰ τὰ αἰσθητὰ καὶ τὰ εἴδη τὰ μαθηματικὰ τῶν πραγμάτων είναι φροντικά μεταξύ, διαφέροντα τῶν μὲν αἰσθητῶν τῷ ἀΐδνῳ καὶ ἀκίνητῃ εἶναι, τῶν δὲ εἰδῶν τῷ τὰ μὲν πόλλῳ ἄττα ὅμοια είναι, τὰ δὲ εἰδός αὐτῷ ἐν ἔκαστον μόνον. ερ. 1002^b 15 τὰ μὲν μαθηματικὰ τῶν δεῖρον ἀλλω μέν τινι διαφέρει, τῷ δὲ πόλλῃ ἄττα ὅμοιειδή είναι οὐδὲν διαφέρει.*

Plato's view as it appears in his writings is that the sciences in the strict sense dealt with Universals only, or, in his language, with 'Ideas' only; with the Idea, *e.g.* of the Circle and not with particular circles. But there is only one 'Idea' of the circle, and so if geometry were of that alone there would be no possibility of a proposition about two or more circles. Similarly in arithmetic, if the only Two to be had was the Idea, there is only one such, and yet in some sense arithmetic requires a plurality of twos. This difficulty is not realised, much less provided for, in the writings of Plato: ¹ but it seems to explain both the meaning and the origin of the conception of τὰ μεταξύ. For this can be understood if we suppose it contrived, whether by Plato or a disciple, to meet the difficulty above stated.²

It was probably held that geometry could not really be of the Idea of the Circle which was only one, and must be of some plurality of circles. But the Platonic doctrine was retained that the objects of science were eternal, unchangeable (and perfect), and not the fleeting (and imperfect) particulars of sense: so these manifold circles were considered as eternal (and perfect). In this they were like the Idea of the circle, τῷ

¹ See below, § 8, on διάνοια and μαθηματικὴ in the *Republic*.

² The writer finds that his friend Mr. J. A. Smith, of Balliol College, has independently arrived at much the same result; and also shares the opinion that the conception of ἀσύμβλητος ἀριθμοί was connected with Platonism in general, and not specially with the Idea-number theory.

άιδια καὶ ἀκίνητα εἰναι, while as a plurality they were so far like the circles of perception, τοῦ πόλλ' ἄττα ὅμοι εἰναι. And so for all the objects of mathematics in general whether numbers or figures.¹

Thus the number with which Mathematics deal was called *μαθηματικὸς ἀριθμός* in distinction from the ἀριθμοὶ ἀσύμβλητοι and said to be *μεταξύ*, or between ideal numbers and concrete numbers.

The doctrine may possibly have been developed by the later Platonists who originated the Idea-number theory, but in itself it is the natural product of the line of thought which produced the conception of the ἀσύμβλητοι ἀριθμοὶ, and has nothing to do with the reduction of all Ideas to Ideas of number.

There were different forms of the Idea-number theory, and of the first form it is said in *Metaph.* M. 1086^a 10, ὁ δὲ πρώτος θέμενος τὰ εἶδη εἶναι καὶ ἀριθμοὺς τὰ εἶδη καὶ τὰ μαθηματικὰ εὐλόγως ἔχοντες. This means as the context shews that whereas a later

¹ τὰ μεταξύ undoubtedly included geometrical figures as well as number. Cp. *Met.* B. ii. 997^b 2 τὰ μεταξύ, περὶ τὰς μαθηματικὰς εἰναι φαιστον ἐπιστήμας, where μαθηματικὰς ἐπιστήμας must include geometry. This seems also the clear implication of what is said of geometry in 997^b 26 *sqq.* Compare also *Metaph.* A. ix. 991^b 27, quoted below, —περὶ δὲ ἀριθμητικῆς, καὶ πάντα τὰ μεταξύ λεγόμενα ἐνδό τινων, which shews that τὰ μεταξύ comprises more than ἀριθμητική.

It would not be necessary to mention this were it not that *Met.* B. ii. 992^b 18 *sqq.* might cause a difficulty: οὐδένα δέχει λόγον οὐδὲ τὰ μεταξύ τοὺς ἀριθμούς, μήκη καὶ ἀπόσπαδα καὶ στερεά, οὐτε ὅπως Ιστινθήται οὐτε τίνει ξεῖν δύναμιν τῶν γάρ οὐτε εἴδη οὐλῶν τε εἶναι, οὐδὲ γίσται ἀριθμοί, οὐτε τὰ μεταξύ, μαθηματικὰ γάρ ἐκείνα, οὐτε τὰ φύσιτά, ἀλλὰ τὰς τέταρτον ἀλλο φάνεται τοῦτο τὸ γένος. Here it is implied that geometrical objects, in some sense, are not included in τὰ μαθηματικά, and so are not among τὰ μεταξύ. But Aristotle is not referring to the ordinary form of the doctrine of τὰ μεταξύ. He is attacking certain Platonists who, while identifying all Ideas with numbers, and retaining the view of the intermediacy of the objects of mathematical science, put, it may be supposed, the Universals of geometrical figures not among the Ideas (which were numbers), but a degree below them (*μερά*), thus introducing a fourth kind of object between the Ideas and τὰ μαθηματικά. The geometrical figures which were objects of geometry would still be found in the μαθηματικά. For these Platonists see 1080^b 23, where Aristotle, after noticing certain differences among the Platonists about Ideal and Mathematical Number, says there were differences also about geometrical objects: δύοτες δὲ καὶ περὶ τὰ μηκῆ καὶ περὶ τὰ ἀπόσπαδα καὶ περὶ τὰ στερεά. οἱ μὲν γάρ ἔχει τὰ μαθηματικά καὶ τὰ μεταξύ τὰς ἴδεας, which shews that they had two kinds of geometrical objects, one the mathematical and the other μεταξύ τὰς ἴδεας. Cp. also 1028^b 25, where these philosophers are distinguished from Plato and Speusippus: —ἔγιοι δὲ τὰ μὲν εἶδη καὶ τοὺς ἀριθμοὺς τὴν αὐτὴν ξεῖν φασὶν, τὰ δ' ἄλλα ἐχόμενα, γραμμὰς καὶ ἀπόσπαδα κ.τ.λ.

² Omitting with Christ the εἰναι after μαθηματικά.

form of the Idea-number theory abandoned the distinction between Ideal number and mathematical number (1086^a 6, *sqq.*), the earliest form (cf. ὁ πρώτος) maintained it. This does not necessarily imply that the distinction itself originated with the Platonists in question.

In *Metaph.* A. ix. 991^b 27, Aristotle criticising the Idea-number theory objects to it that it would necessitate the invention of another kind of number for the purpose of ἀριθμητική, and indeed the whole sphere of τὰ μεταξύ, a conception which he holds fraught with difficulty: —ἔτι δὲ ἀναγκαῖον ἔτερον τι γένος ἀριθμοῦ κατασκευάζειν, περὶ δὲ ἣ ἀριθμητική, καὶ πάντα τὰ μεταξύ λεγόμενα ἐπότινον.³

This objection does not the least necessitate that the μεταξύ theory should have been a special consequence of the Idea-number theory as such. Aristotle is attacking the latter generally,—finding all the objections he can to it, and this objection would be relevant because the Idea-numbers in this later theory were of course ἀσύμβλητοι ἀριθμοί⁴ and as such seemed to provide no object (as has already been explained) for mathematical operations. Any wrong inference from this passage is corrected by Aristotle's own statements, above quoted from *Metaph.* 987^b 14 and 1002^b 15 which indicate that the μεταξύ theory simply originated in the necessity of finding a plurality for mathematics as against the absolute unity of the mere Idea of a figure or a number. It is perhaps significant (though no great stress need be laid on it) that in all the passages where τὰ μεταξύ in general, and not merely μαθηματικὸς ἀριθμός, are opposed to the Ideal world, the latter is designated by εἶδη or ἴδεαι not ἀριθμοί (except in one which in a way combines both), and there are a considerable number of them—987^b 14, 995^b 16, 997^b 2, 998^b 7, 1002^b 12, 1028^b 20, 1059^b 6, 1069^a 35. Even in the exceptional passage, 992^b 16, the division is still into εἶδη, τὰ μεταξύ, and τὰ φύσιτά, the text implying in this case that the εἶδη are ἀριθμοί. So that it seems as if in any case the usual formula for the division had εἶδη, not ἀριθμοί. See the discussion below of the phrase εἰδητικὸς ἀριθμός.

In *Metaph.* N. iii. 1090^b 32, ὁ μαθηματικὸς ἀριθμός, which is one part of τὰ μεταξύ, is said to be μεταξύ τοῦ εἰδητικοῦ (sc. ἀριθμοῦ) καὶ

³ The editors have a comma after κατασκευάζειν and none after ἀριθμητική which gives what seems a wrong sense.

⁴ See above, § 3, paragraph 3.

τοῦ αἰσθητοῦ. The contrast here not being with mathematical Ideas in general but only with Ideal number, the substitution for *εἰδῶν* of an expression such as *εἰδητικὸς ἀριθμός* would be natural, even if Aristotle had not, as he may have in this place, the Idea-number theory before him. The expression in itself need not mean anything more than Ideal Number, as will be seen later on.¹ It may indeed refer to the Idea-numbers, but there is nothing in this passage any more than in the one above discussed, *Metaph.* 991^b 27, to prove that the conception of *τὸ μεταξύ* is only a consequence of the Idea-number theory.

§ 5.—*On τὸ πρότερον καὶ ὕστερον in the ἀσύμβλητοι ἀριθμοί.*

We may next consider the meaning of the *πρότερον καὶ ὕστερον* assigned to Ideal Number. It has been said that the text of *Metaph.* M. vi. 1080^b 11 *sqq.* (quoted above, § 1, init.) is vindicated against Trendelenburg's insertion of *μῆν* before *ἔχοντα τὸ πρότερον καὶ ὕστερον* [due to his mistake about the interpretation of *N. Eth.* I. vi] and that the statement in it that Ideal Number contains 'the Before and After' is explicable, because 'Bonitz and others have clearly proved that *τὸ πρότερον καὶ ὕστερον* was a technical term in the ideal arithmetic for the relation of the factor (*τὸ γεννῶν*) to the product (*τὸ γεννώμενον*).'² It is difficult to understand how this opinion in this precise form could be attributed to Bonitz. Bonitz in consequence of his mistaken notion that there was nothing really numerical about the Idea-Numbers thought their order must be one of quality (de ordine quodam qualitatis agi) and not a numerical one at all. This seems inconsistent with supposing that order to be one of factor and product, nor does there seem to be evidence of such a view in Bonitz' commentary. Zeller, it is true, makes the relation of *πρότερον καὶ ὕστερον* that of factor and product in some sense; and this passes with him in a confused way into a purely qualitative distinction,² with which latter Bonitz would agree. But Zeller's defence of the text turns solely on the circumstance that there is abundant evidence in the *Metaphysics* that some kind of *πρότερον καὶ ὕστερον* was attributed to the Ideal Numbers and not at all upon his theory of what kind it was.

¹ See § 8.—On the expression *εἰδητικὸς ἀριθμός*.

² So also Schwegler, note on *Metaph.* B iii. 16. See below note to paragraph 5.

However there is in any case a misunderstanding. A simple and sufficient explanation of the *πρότερον καὶ ὕστερον* is indicated by the Aristotelian text itself (in which it may be remarked the technical distinction of *γενῶν* and *γεννώμενον* as factor and product does not even occur): whereas the one proposed is entirely inapplicable to the *ἀσύμβλητοι ἀριθμοί* rightly understood, is not really applicable even to the later Idea-number theory, as will be seen, and at any rate is not necessary for either. The Ideas of numbers, as being the Universals of number and therefore *ἀρίθμητοι*, are as *ἀσύμβλητοι* entirely outside one another, in the sense that none is a part of another. Thus they form a series of different terms, which have a definite order (*ἔχοντι τὸ πρότερον καὶ ὕστερον*). They are nothing but what mathematicians call 'the series of natural Numbers,' where the definite article is right, because there is only one such series, consisting as it does of Universals each of which is unique. The order of this series is obviously enough to explain the passages in the *Metaphysics*, and enough for the requirements of the argument attributed to the Platonists in the *Ethics*.

This view is fully confirmed by *Metaph.* M. vi, where the order of the Idea-numbers, which, as has been said, are treated on their numerical side as Ideas of number, is closely associated with the fact that they are *ἀσύμβλητοι*, and not with any sort of *γένεσις* of them. Thus according to 1080^a 17, if there is a kind of number such that *τὸ μὲν πρώτον τι αὐτοῦ τὸ δέ ἔχομενον*, the numerical elements in such order must be *ἀσύμβλητοι*. Two cases are possible. Either the elements are *μονάδες*, and then, if these have an order of *πρότερον καὶ ἔχόμενον*, they must be all *ἀσύμβλητοι*. Or the elements are the Numbers; and here the Numbers as forming a series with *πρῶτον* and *ἔχόμενον* must be *ἀσύμβλητοι* with one another, that is, the units in any Number must not be *συμβληταὶ* with those of another, though its own units are *συμβληταὶ* within itself. In this case we have *μετὰ τὸ ἐν πρώτῃ*³ ἡ διάστασις, *ἔπειτα ἡ τριάς, καὶ οὕτω δὴ ὁ ἔλλος ἀριθμός*—i.e. 'the series of natural Numbers.' The mutual exclusiveness, caused by their being *ἀσύμβλητοι*, which enables them to form a series is expressly put

³ Christ would emend either to *ἡ πρώτη διάστασις* or *ἡ διάστασις ἡ πρώτη*. But the text is doubtless sound, for *πρώτη* corresponds to *ἔπειτα*. That *πρώτη* should be assigned to *διάστασις* in another sense in the same context ought to cause no difficulty. Such carelessness is common in Aristotle, and there are far harsher instances to be found than this.

thus:—οὗτος δὲ (sc. ὁ ἀριθμός) μετὰ τὸ ἐν δύο ἔτερα ἀνεύ τοῦ ἐνὸς τοῦ πρώτου, καὶ ἡ τρίας ἀνεύ τῆς δύοδος, ὅμοιός δὲ καὶ ὁ ἄλλος ἀριθμός. Thus if there is a serial order of the Numbers they must be ἀσύμβλητοι. And the converse of this is put. In contrast to the number which exhibits an order, the number which does not exhibit an order is such that all units in it are συμβλητά (1080^a 20), and this is the *μαθηματικός ἀριθμός* (* 21 cp. 1081^a 5). The inclusiveness of one number in another in the *μαθηματικός ἀριθμός*, which prevents it from having the *πρότερον* καὶ *νότερον*,¹ is put thus (1080^a 30) διὸ καὶ ὁ *μαθηματικός ἀριθμός* ἀριθμεῖται μετὰ τὸ ἐν δύο, πρὸς τῷ ἐμπροσθεν ἐνὶ ἄλλῳ ἐν, καὶ τὰ τρία πρὸς τοῖς δυοῖς τούτοις ἄλλο ἐν, καὶ ὁ λοιπὸς δὲ ὡσαύτως. Thus clearly the property of being ἀσύμβλητος is sufficient and necessary to constitute a kind of ἀριθμός a series with *πρότερον* καὶ *νότερον*. A little below in the same context the production of numbers out of certain elements, according to some philosophers is alluded to:—οἱ λέγοντες τὸ ἐν ἀρχῇ εἶναι καὶ οὐσίαν καὶ στοιχεῖα πάντων, καὶ ἐκ τούτουν καὶ ἄλλον τυνὸς εἶναι τὸν ἀριθμὸν: but no attempt is made to connect the *πρότερον* καὶ *νότερον* with this.

We may now consider what is found on the γένεσις of number in other places, so far as it concerns the question of the priority of factor to product. The derivation of numbers from τὸ ἐν and ἡ ἀόριστος δύναμις as elements, whether original or adapted from some Pythagorean source, may perhaps belong to the fantastic Platonism which identified all Ideas with Numbers, and these elements may be accordingly regarded as a sort of arithmetical translation of *τέρας* and *ἀπειρον*, owing to the Pythagorean association of the former with τὸ ἐν and the latter with the dyad. The description however of the process did not remain a mere metaphor, but got a kind of arithmetical expression though but a vague one. The ἀόριστος δύναμις appears as an operating factor, the effect of which is to double what it operates upon, and so it is δυοτούς (1082^a 10). Thus in distinction from the ὠρισμένη δύναμις, which is the number Two and the abstraction of 'Twoness,' it really comes to be the abstraction of 'Twiceness.' Accordingly by combination of τὸ ἐν with the ἀόριστος δύναμις is produced the number Two, the δύναμις, and by the operation of the ἀόριστος δύναμις on this

¹ Hence if *Metaph.* 999^a 6 referred to the Platonist theory, the ἀριθμός there spoken of could only be *μαθηματικός ἀριθμός*. But there is really no reference to Platonism in the passage: see below, § 7.

again, the number Four. By successive operations of this kind on successive results there arises the series of even numbers which are powers of Two. This would not yield the odd numbers, or the even ones which have an odd factor. Aristotle expressly notes this as a difficulty in *Metaph. M.* iii. 1091^a 10 (cf. *22), and we may infer that the theory was originally vague enough to be open to his objection.

Another passage seems to indicate that an attempt to remedy the defect had been made by adding other principles. In *Metaph. M.* viii. 1084^a 3 Aristotle says, in an objection, ἡ δὲ γένεσις τῶν ἀριθμῶν ἡ περιττοῦ ἀριθμοῦ ἡ ἀριθμὸν αἰτεῖ ἐστιν, ὃδι μὲν τοῦ ἐνὸς εἰς τὸν ἄριθμον πέπτοντος περιττός, ὃδι δὲ τῆς μὲν δύοδος (sc. τῆς ἀόριστου) ἐμπιπτούσης ὁ ἀριθμός διπλασιάζεται, ὃδι δὲ τῶν περιττῶν ὁ ἄλλος ἄριθμος. The odd numbers are produced by the operation of τὸ ἐν on an even number, in the way of addition: the other even numbers (ὁ ἄλλος ἄριθμος) which do not arise from the operation of the ἀόριστος δύναμις, above explained, have their γένεσις described in ὃδι δὲ τῶν περιττῶν κ.τ.λ.. This we might expect to be the operation of the ἀόριστος δύναμις on odd numbers, and so Bonitz understands it: but the Greek is not suited to this, and rather suggests τῶν περιττῶν ἐμπιπτούσων εἰς τὸν ἄριθμον, which, understood of multiplication, would give the desired result. However the text is elliptical, for after ἐμπιπτούσης is to be understood εἰς τὸ ἐν as well as εἰς τὸν ἄριθμον. This account involves addition as well as multiplication, and if therefore the *πρότερον* καὶ *νότερον* had to be explained by it, that formula could not be confined to the relation between 'factor (γεννῶν) and product (γεννώμενον).'² Thus the proposed explanation of τὸ πρότερον καὶ *νότερον*, the one which seems to be a part² of Zeller's, fails even in the case most favourable to it.

In the case of what may be supposed to be the original meaning of the ἀσύμβλητοι ἀριθμοί such a genesis whether by multiplication or addition is not to be thought of. It may be argued, as before, that the philosopher who grasped the truth expressed in the phrase ἀσύμβλητοι ἀριθμοί, could not have regarded them as generated by multiplication or addition: that would be too crude a misunderstanding of the principle to which his own insight had led him.

² Zeller's utterances however (*Phil. d. Gr.* 3rd Edn. ii. 1. p. 570) are very confused. It is not necessary to discuss the nature of the confusion, as he has misunderstood the meaning of the ἀσύμβλητοι ἀριθμοί and of the *πρότερον* καὶ *νότερον*.

It is true that the *γένεσις* theory of some other Platonists involves a *πρότερον* καὶ *νότερον* of factor and product and a *πρότερον* καὶ *νότερον* of part and whole in the way of addition, and Aristotle makes use of the former kind in criticisms, as in 1082^a 26, and elsewhere. But though he often refers to the *γένεσις* from τὸ ἐν and ἡ ἀριθμός δύάς he never says that the *πρότερον* καὶ *νότερον* characteristic of the *ἀσύμβλητοι* ἀριθμοί in the Platonist theory was either relative to multiplication or relative to addition, or relative to any sort of *γένεσις*; but, as we have seen he connects the order of these numbers solely with the fact that they are *ἀσύμβλητοι*. To the passages already quoted for this, another *Met.* M. vii. 1081^a 17 *sqq.* may be added, partly misunderstood both by ancient and modern commentators,¹ the key to which is that if *all* *μονάδες* are *ἀσύμβλητοι* they necessarily form a series in which one is before another in order, according to the principle already enunciated, as we have seen, in *Met.* M. vi. 1080^a 18. Here of course there could be no question of the production of *μονάδες* by multiplication.

The Idea-numbers then, as Ideas of number are *ἀσύμβλητοι*, and as Ideas of number have the *πρότερον* and *νότερον* of the serial order of 'the natural Numbers.'

§ 6.—*On the meaning of ἀριθμῶν in Nic. Eth. I. vi.*

The question now naturally presents itself, Are the *ἀριθμοί* in *Nic. Eth. I. vi.*, the Ideas of number as in the Ideal theory represented by Plato's writings, or are they the Idea-numbers of later Platonism? It is evident that what is said in this chapter of the *Ethics* is true of both stages of the theory, and it is hardly possible to decide which stage Aristotle had in mind. There is no trace either here or anywhere else in the *Ethics* of the Idea-number theory. In the corresponding chapter of the *Eudemian Ethics*, there is a reference to it, but not in the part which corresponds to the passage in the *Nicomachean Ethics* on the *πρότερον* καὶ

¹ ἂμα γάρ αἱ ἐν τῇ δύάδι τῇ πρώτῃ μονάδες γεννῶνται. The meaning of an objection brought in these words is that in the process of *γένεσις* referred to the *μονάδες* would have to be coordinate, whereas (ex hyp.) as *ἀσύμβλητοι* one must be necessarily prior to the other. Christ notices that Alexander thinks ἡ γάρ ἄμα preferable, and himself conjectures ἂμα γάρ αἱ ἐν τῇ δύάδι πρώτῃ καὶ αἱ ἐν τῇ τριάδι μονάδες, which can hardly be due to anything else than a misunderstanding. Bonitz appears to have taken the place rightly, but perhaps has not brought the point out clearly enough to prevent Christ's misconception.

νότερον in the *ἀριθμῷ*. It is in an argument added by the author of the *Eudemian Ethics* on his own account, and stands in contrast to the *Nicomachean Ethics* because it bases a criticism of the Idea theory upon its later number form, a thing never done in the *Nicomachean Ethics*. But even if the reference had been in a passage which had a counterpart in the *Nicomachean Ethics*, it would not in the least settle the bearing of the Aristotelian text, such additions being quite in the Eudemian manner. But the really important matter is that even if Aristotle had the Idea-numbers in mind, what he says of them, as is evident from the foregoing investigation, applies to their numerical aspect as Ideas of numbers, and not at all to them as Idea-numbers. Besides if he were regarding them as Ideas without any reference to a numerical character and as standing in an order of *πρότερον* καὶ *νότερον* according to some principle not numerical² he would surely have written *ἰδεῶν* and not *ἀριθμῶν*, the latter word being in such a context merely irrelevant and confusing.

§ 7.—*On the Interpretation of Metaph. B iii. 999^a 6.*

Some have held that τὰ εἰδη τῶν ἀριθμῶν here refers to the *μαθηματικὸς ἀριθμός*, others that it refers to the *εἰδητικὸς ἀριθμός*. If the choice were really between these alternatives, it is obvious that the only possible one would be that *εἰδητικὸς ἀριθμός* was intended, since, as has been seen (§ 5), *μαθηματικὸς ἀριθμός* does not admit of the *πρότερον* καὶ *νότερον*. But the truth is both of these contentions are irrelevant, for in this place Aristotle has not even got the Platonist distinction of *μαθηματικὸς ἀριθμός* from the *ἀσύμβλητος ἀριθμός* before him: he is not criticising anything specially Platonic, and he is speaking in the language of his own philosophy.

The passage before us belongs to a series of questions about *ἀρχαί* raised at the beginning of bk. B of the *Metaphysics*. In the preceding chapter (ch. 2) Aristotle has considered the Platonic theory. In the present chapter (ch. 3) he passes from that to a general question *περὶ τῶν ἀρχῶν* which has no special reference to Platonism as such—

² The current expression 'logical order,' which we often use for some order not a time order, is vague. It seems properly to mean an order determined by some principle or conception, and thus should include every kind of numerical order, to which nevertheless it is sometimes opposed.

πότερον δεῖ τὰ γένη στοιχεῖα καὶ ἀρχὰς ὑπολαμβάνειν ἢ μᾶλλον εἰς ὃν ἐνταρχόντων ἔστιν ἔκαστον πρώτον. After an aporematic discussion of this (998^a 20—^b 13) he proposes in the present context (998^b 14 *sqq.*) the question whether, supposing the γένη really were ἀρχαὶ these would be the highest γένη or the 'infima species,'—πρὸς δὲ τούτους εἰ καὶ μάλιστα ἀρχαὶ τὰ γένη εἰσὶ, πότερον δεῖ νομίζειν τὰ πρώτα τῶν γενῶν ἀρχὰς ἢ τὰ ἔσχατα κατηγορούμενα ἐπὶ τῶν ἀτόμων; On this again there is a set of aporematic arguments, the first part of them being directed against the claims of the highest γένη. To this part belongs the passage on the πρότερον καὶ ὑστερόν: and it is immediately preceded by an argument the analysis of which will shew how remote is the consideration of anything Platonic. τὸ δὲ and τὸ ἐν having been given as examples of γένη which might seem suited beyond all others to be ἀρχαὶ, a subtle attempt is made to reduce the view that τὸ ἐν could be an ἀρχή to a contradiction (999^a 1—6). If, it is said, τὸ ἀδιαιρέτον is ἐν, then the infima species as being ἀδιαιρέτον (*sc. κατ' εἶδος*) has a better title to be considered a ἐν (and so an ἀρχή) than τὸ ἐν itself, because this latter as a γένος is διαιρετὸν εἰς εἶδον. Then follows the passage in question:—ἔτι ἐν οἷς τὸ πρότερον καὶ ὑστερόν ἔστιν, οὐχ οἷον τε τὸ ἐπὶ τούτων εἶναι τὸ παρὰ ταῦτα, οἷον εἰς πρώτη τῶν ἀριθμῶν ἢ δύος, οὐκ ἔσται τὸς ἀριθμὸς παρὰ τὰ εἶδη τῶν ἀριθμῶν δύοις δὲ οὐδὲ σχῆμα παρὰ τὰ εἶδη τῶν σχημάτων. Here τὸ ἐπὶ τούτων means the common predicate of certain species. εἶδος does not mean 'Ideas' but simply species as contrasted with the γένος. Aristotle is maintaining that the common predicate of εἶδος which stand in the relation of πρότερον καὶ ὑστερόν cannot be something separable (*παρὰ*) from each species and abstractable from it, in the sense that each of them contains not only what this predicate means, but also something more. Thus figure, σχῆμα, is predicated of the various species of figure, τὰ εἶδη τῶν σχημάτων, the triangle, the quadrilateral, etc., but 'triangle' is not figure together with something else other than figure. 'Triangle' contains nothing but what is comprised in 'figure,' so that if we abstract 'figure' from 'triangle,' no differentiae of it is left. Or, if we leave any such, what is left is a determination of 'figure,' and so 'figure' is left and has not been abstracted. Similarly for the εἶδη τῶν ἀριθμῶν, the various species of number, that is the Numbers Two, Three, Four, etc., the common predicate number is not τὸ παρὰ ταῦτα; if we abstract 'number' or numerical-

ness from Two, no differentia of it is left.

This has no connexion whatever with the Platonist distinction of ἀτύμβλητος ἀριθμός and μαθηματικὸς ἀριθμός, nor is there any reference to Platonism as such.

Though the principle ἔτι ἐν οἷς τὸ πρότερον καὶ ὑστερόν κ.τ.λ. was, as we learn from the *Ethics*, one recognised by the Platonists, it was also recognised by Aristotle and is here put as his own view. In a familiar passage also from the *Politics* (1275^a 34 *sqq.*) quoted by Zeller, Aristotle puts the view as his own and argues from it. Similarly εἰ πρώτη τῶν ἀριθμῶν ἡ δύος has nothing to do with Platonism, but simply means that the number Two comes first in the series of Numbers. Nor has the passage anything to do with the notion of a γένεος not completed till an ἀτομον εἶδος is reached.

The inseparableness of the generic predicate from species which stand in a certain relative order is an example of a more general principle. If a generic notion is such as to include within itself the differentiae of certain given species, then none of the species contain anything outside (*παρά*) and distinguishable from what is contained in the given notion: so that to abstract the determination represented by that notion from the species is to take the differentiae as well. The species, it is true, may be said to agree with one another in the genus, but what they differ in is not something outside the genus but it also belongs to the genus. What red and blue agree in is colour, but what they differ in is also colour. The general principle is appreciated by Aristotle and is the basis of the argument—perhaps not always understood—which he urges at the end of *Nic. Ethics* I. vi. 1096^b 23. The goods agree in goodness, but they do not therefore differ in something which is not goodness but just in goodness. Hence the definition of the goodness of one good is different from the definition of the goodness of another: which of course prevents there being one single criterion of all good.

The case of the πρότερον καὶ ὑστερόν falls under this general principle, because the differentiae in respect of order are comprised in the generic notion itself as is obviously the case with the generic notion of number.

¹ Eudemos' attempt to explain this case in *Eud. Eth.* I. viii., where he reproduces *Nic. Eth.* I. vi. 1096^a 17 *sqq.*, is an entire misunderstanding.

§ 8.—*On the expression εἰδητικὸς ἀριθμός.*

It seems always assumed, perhaps without a sufficient examination of the evidence, that *εἰδητικὸς ἀριθμός* was the special designation of the Idea-numbers as such. It may have been so, but it is not clear that this was the original meaning of the phrase or even that Aristotle uses it in this special reference.

The conception of 'mathematical number,' as distinguished from 'Ideal number,' arises, as we have seen, out of the earlier Platonic theory of Ideas and not out of the later Idea-number theory. That number from which 'mathematical number' was distinguished was then simply the 'Ideas,' *ἰδέαι* or *εἰδη*, of number, in true reference to number. If a collective expression for the *εἰδη* τῶν ἀριθμῶν, parallel to the collective *μαθηματικὸς ἀριθμός* was wanted, *εἰδητικὸς ἀριθμός* might very naturally suggest itself. It would be neater and more convenient than *οἱ ἐν τοῖς εἰδέσι ἀριθμοί* which occurs in *Metaph.* N. vi. 1093^b 21, and that such a terminology should spring up in this way is no more than might be expected. If this were so, when later the Ideas of number became the Idea-numbers, they would in opposition to *μαθηματικὸς ἀριθμός* still be called *εἰδητικὸς ἀριθμός* in the same sense as before.

The three Aristotelian passages in which *εἰδητικὸς ἀριθμός* is named, *Metaph.* M. ix. 1086^a 2 *sqq.* and N. iii. 1090^b 32 *sqq.*, are compatible with this view: they favour it but hardly prove it.

In 1086^a 2 there comes first a statement about certain Platonists who acknowledged only one kind of number, the *μαθηματικὸς ἀριθμός*:—οἱ μὲν γὰρ τὰ μαθηματικὰ μόνον ποιῶντες παρὰ τὰ αἰσθητὰ, ὄρωντες τὴν περὶ τὰ εἴδη δυνχέρεαν καὶ πλάσιν, ἀπέστησαν ἀπὸ τοῦ εἰδητικοῦ ἀριθμοῦ καὶ τὸν μαθηματικὸν ἐποίησαν. The difficulty referred to is not one which arose out of the identification of all Ideas with the Ideas of numbers, but solely out of the distinction of an Ideal number from a mathematical, and there is no reason whatever why *εἰδητικὸς ἀριθμός* should mean anything but Ideal number, in the sense of Ideas of number proper. *εἰδητικός* just corresponds to *τὰ εἴδη* in the preceding clause. Next we are told that certain Platonists who identified all the Ideas with Ideas of numbers acknowledged only the *εἰδητικὸς ἀριθμός* and rejected the *μαθηματικός*:—οἱ δὲ τὰ εἴδη βούλομενοι ἡμα καὶ ἀριθμὸν ποιεῖν, οὐχ ὄρωντες δὲ εἰ τὰς ἀρχάς τις ταύτας¹ θήσεται, πῶς ἔσται ὁ μαθηματικός

¹ There is a curious slip here in the Teubner edition:—‘ταύτας codd. edd., ταῦτας emendavi.’

παρὰ τὸν εἰδητικόν, τὸν αὐτὸν εἰδητικὸν καὶ μαθηματικὸν ἐποίησαν ἀριθμὸν τῷ λόγῳ, ἐπεὶ ἔργῳ γ' ἀνήργηται ὁ μαθηματικός. Here again *εἰδητικός* is defined by its opposition to *μαθηματικός*. With these Platonists, of course, *εἰδητικὸς ἀριθμός*, even if properly meaning Ideal number, would include all Ideas because they reduced all Ideas to Ideal numbers; yet it was not from this point of view that they rejected *μαθηματικὸς ἀριθμός*, but from considerations of number as number: and so in this passage too there is no reason why Aristotle should be using *εἰδητικὸς ἀριθμός* in any other sense than that of Ideal number.

A second passage, 1090^b 32, is as follows:—οἱ δὲ πρώτοι δύο τὸν ἀριθμὸν ποιῶντες, τὸν τε τῶν εἰδῶν καὶ τὸν μαθηματικὸν ἄλλον, οὐδαμῶς οὐτ' εἰρήκασιν οὐτ' ἔχοιεν ἀνεπείν πῶς καὶ ἐκ τίνος ἔσται ὁ μαθηματικός. ποιοῦντο γὰρ αὐτὸν μεταξὺ τοῦ εἰδητικοῦ καὶ τοῦ αἰσθητοῦ. εἰ μὲν γὰρ ἐκ τοῦ μεγάλου καὶ μικροῦ, ὁ αὐτὸς ἐκείνῳ ἔσται τῷ τῶν ιδεῶν κ.τ.λ. Here *εἰδητικὸς ἀριθμός* is the equivalent of *τὸν τῶν εἰδῶν* in the previous sentence, and of *τῷ τῶν ιδεῶν* in the following one, and corresponds to *τὰ εἴδη* in the parallel place 987^b 15 (where, as we have seen, the origin of the conception of *μεταξύ* is not put in connexion with anything which concerns the Idea-number theory, but with a difficulty arising from the ideas of number as such), and the meaning 'Ideal number' is the only one required in the passage and the most suitable.

The remaining passage is 1088^b 29:—ἔνν τε τὸν εἰδητικὸν ἀριθμὸν ἐξ αὐτῶν (sc. τοῦ ἔννοι καὶ τῆς ἀριστοῦ δύναδος) ποιῶσιν, ἔνν τε τὸν μαθηματικὸν. Here also the only meaning of *εἰδητικὸς ἀριθμός* which is relevant is that of Ideas of number and not that of Idea-numbers.

In this matter the usage of the Greek Commentators does not carry us farther than the Aristotelian text. *εἰδητικὸς ἀριθμός* would be a convenient formula for Idea-numbers as opposed to numbers in the ordinary sense, and may therefore have come to be the equivalent of Idea-numbers with them, and it should be noticed that the plural *εἰδητικοὶ ἀριθμοὶ* which they use never seems to occur in Aristotle but only the singular collective *εἰδητικὸς ἀριθμός*.

§ 9.—*Is the doctrine of τὰ μεταξύ to be found in Plato's 'Republic'?*

In the familiar passage at the end of the Sixth Book of Plato's *Republic*, διάνοια which is concerned with the objects of mathematics

(though as will be seen not with these alone) is said to be between *voūs* and *δόξα*, the latter being concerned with the *αἰσθητά*; and the objects of *διάνοια* are somehow between the *νοητά* and *αἰσθητά*. The field of *διάνοια* is treated by Ueberweg as if it corresponded to the *τὰ μεταξύ* of the *Metaphysics*, and accordingly he puts in it *τὰ μαθηματικά* which are not *ἰδέα*, the *ἰδέα* being confined to the upper division of *νοητά* corresponding to *voūs*. If this were right it would be extraordinary that Aristotle should in the *Metaphysics* make no kind of reference to the *Republic* or to its terminology. But there is really no such doctrine in the *Republic*. The objects of *διάνοια* are *ἰδέα*, and *διάνοια* itself is a faculty of apprehending universals in clear distinction from any perception of particulars. Moreover—though this is of less importance—*τὰ μαθηματικά* do not constitute the whole of the objects of *διάνοια*. A careful examination of the text of the *Republic* can hardly leave any doubt on these points. Perhaps some misunderstanding might arise from the fact that one of the distinctions Plato makes between the objects of *διάνοια* and *voūs* is in the manner in which they are studied and not in the objects themselves. The objects of *διάνοια* are studied with the help of sensible objects, *i.e.* figures, etc. perceived by the senses. But the text clearly distinguishes between the object really studied and those sensible objects which are but aids to the study. The geometrical object studied is the original of which the sensible figure is but the copy, and this language in Plato shews that the geometrical object is the *ἰδέα*:—*τοῖς ὄρωμένοις εἴδετι προσχρῶνται ...οὐ περὶ τούτων διανοούμενοι, ἀλλ' ἔκεινων περὶ οἷς ταῦτα ἔοικε*, and similar expressions. This is made unmistakeable by the examples given—*τετράγωνος αὐτός, διάμετρος αὐτός*, which can only be the *ἰδέα* of the *τετράγωνος* and of the *διάμετρος* respectively. By his reiteration Plato shews his concern lest we should be misled by the use made of the sensible figures into confounding them with the true objects of mathematics, which are these Universals and these alone—*ἀλλ' οὐ ταύτης (τῆς διαμέτρου) ἦν γράφουσι*. And it is to these objects and just in this sharp distinction from the objects of sense, *i.e.* from the particular figures which are drawn to illustrate them, that *διάνοια* is assigned, as a faculty which is not of the sensible objects: *οὐ περὶ τούτων διανοούμενοι μενοι εἰδέν* *ἀλλ' ἔκεινων περὶ οἷς ταῦτα ἔοικε, τοῦ τετραγώνου αὐτοῦ, etc.* So again *ζητοῦντες τε αὐτὰ ἔκεινα εἰδέν* *ἄν οὐκ ἀλλως ἴδοι η τῇ διανοίᾳ*, where

αὐτὰ ἔκεινα refers to the *ἰδέα* of the *τετράγωνος* of the *διάμετρος* and such like. Cp. 529 ε ἡ δὴ λόγῳ μὲν καὶ διανοίᾳ ληπτά, δύει δ' οὖ; 526 Λ, ὃν διανοηθῆναι μόνον ἐγχωρεῖ: 511 c, καὶ διανοίᾳ μὲν ἀναγκάζονται ἀλλὰ μὴ αἰσθήσεσιν αὐτὰ θάσθαι οἱ θεῶμενοι.

Notwithstanding these express statements confusion may have been caused perhaps by the reflection that on the one hand Plato makes a use of perceived particulars characteristic of the mathematical procedure, and on the other hand seems to assign *διάνοια* as the special faculty of the mathematician: whence it might seem *διάνοια* must include the reference to particulars.

But there ought to be no difficulty. The faculty of mathematical study, as a process of investigation, is not *διάνοια*: if any name is to be given to it *μαθηματική* would be the most appropriate. This, as the mathematician's procedure, involves *αἰσθησις* so far as it employs the sensible figure and *διάνοια* so far as the Universal is apprehended. *διαλεκτική* as a process stands in a very similar relation to the two 'faculties' of *διάνοια* and *voūs*: it is neither, but involves both, as will be seen presently.

If Plato had intended that there should be anything of the nature of sensuous intuition in *διάνοια*, such, for instance, as some plurality distinguishing its object from the unity of the Universal, he could not have failed to say so, and, in such a context, say it with great clearness: certainly he would never have employed expressions the only natural interpretation of which is the very opposite.

If then the objects of *διάνοια* are *ἰδέα*, how does it differ from *voūs*, and how do its objects differ from *νοητά*, in the narrower sense of that term? To these questions Plato himself, at the end of *Rep.* vi., supplies a clear answer, and one which once more shews that the objects of *διάνοια* are *ἰδέα*.

He holds that all the Ideas are connected with one another in a system which depends on one Idea, the Idea of the Good. This is the absolute and self-sufficient principle or *ἀρχή* on which they all depend. The knowledge of this system in its completeness, the ideal at which *διαλεκτική* aims and which a completed *διαλεκτική* would realise, is called *voūs*; and thus an *ἰδέα* is not a *νοητόν*, in the higher sense as object of *voūs*, unless it is known as a member of this system and therefore in connexion with the *ἀρχή*. If not seen in this connexion (*μετ' ἀρχῆς*) its full nature is not apprehended, and, its validity is not really known, because

it is this connexion which alone guarantees validity.

Now in mathematics the Ideas concerned are not entirely without connexion: for by processes of consistent reasoning groups of Ideas are shewn to depend on a limited number of Ideas. But these latter are not connected with one another and the ultimate *ἀρχή*, the Idea of the Good. Thus though treated as absolute starting-points (*ἀρχαί*) in mathematics they are not self-sufficient, therefore not absolute but only *ὑποθέσεις*, and their validity can only be assured when derived from the Idea of the Good. The connexions then between the Ideas in mathematics are not complete, and thus an Idea in it, though seen in some of its connexions with others, is not seen in the completeness of such connexions in the system which depends on the ultimate *ἀρχή*, and therefore not in the completeness of its own nature.

On this account obviously an Idea as seen in mathematics is not *νοήσις*; it is not object of *νοήσις*: and the faculty which apprehends them in this incomplete way though a faculty of Universals, a faculty of thought, not of sense (*διάνοια καὶ μὴ αἰσθήσεων*), and as thought falling with *νοήσις* under the general designation *νόησις*, is inferior to *νοήσις*. This is the distinction Plato makes between the two faculties when he sums up his result at the end of the sixth book of the *Republic*; and it is the only distinction.

It follows of course that an object of *διάνοια* when its full nature is apprehended, when, that is, its connexion with the true *ἀρχή* is seen, is *νοήσις* in the higher sense, i.e. object of *νοήσις*; and this is exactly what Plato says:—*καί τοι νοητῶν ὄντων μετ' ἀρχῆς*. This is a confirmation of the view that the objects of *διάνοια* are *ἰδέα*, for nothing but an *ἰδέα* can be object of *νοήσις*.

There are certain characteristics of Plato's terminology which also confirm this result. The sphere of *διάνοια* is a part of the whole sphere of *νοητῶν*, in opposition to the *ὄρατῶν* (= *αἰσθητῶν*), and *διάνοια* itself is a species of *νόησις* in opposition to *αἰσθησις*. Now such a passage as that in 507, where it is said *τὰς ἑδέας νοεῖσθαι ὄρασθαι δ' οὐ*, taken in connexion with this indicates that the objects of *νόησις* as such are *ἰδέα*. Again in the seventh book of the *Republic* the objects of perception which stimulate the mind to the exercise of thought and the discovery of the Universal are called variously *ταρακλητικὰ διάνοιας* and *έγερτικὰ νοήσεως* (p. 524).

διαλεκτική must not be confused with *νοήσις*. It is a process which begins with Ideas incompletely connected as seen in *διάνοια*. It therefore involves the use of this faculty. Its work is to effect more and more connexions between the Ideas and finally effect their full connexion with the *ἰδέα τοῦ ἀγαθοῦ*. Only when this result had been consummated and only when *διαλεκτική* had finished this work would *νοήσις* appear. *διαλεκτική* therefore begins from *διάνοια*, and its ideal ending is in *νοήσις*. As already indicated, it is important for the proper interpretation of *διάνοια* to recognise that *διαλεκτική* and *μαθηματική* are processes of investigation to be distinguished from the fourfold division of 'faculties of objects'—as they may be called for want of a better term—*νοήσις*, *διάνοια*, *πίστις*, *εἰκασία*.

From the general description Plato gives of *διαλεκτική* taken with the allegory of the Cave it would seem that *διαλεκτική* in its upward progress brings to light *ἰδέα* not found in the field of the sciences. These too, properly speaking, would not be *νοητά* till the process of *διαλεκτική* was complete, but Plato has not considered this point. There is another point also omitted in the sixth book, but implied in the allegory of the Cave. From the distinction he makes between *διάνοια* and *νοήσις*, it should follow that any *ἰδέα* whether mathematical or not, before its connexion with the *ἰδέα τοῦ ἀγαθοῦ* was understood would be object of *διάνοια*. An important class of these would be the ethical Ideas. Important as these are to him Plato, carried away by his interest in defining the position of the sciences, seems at the end of the sixth book of the *Republic* to have forgotten all about them—great thinkers sometimes do these things. But there is a passage in the Allegory of the Cave which shews that ethical notions are conceived of us having the same kind of gradations in respect of reality and truth as scientific notions:—517 ε, *περὶ τῶν τοῦ δικαίου σκιῶν ἡ διαλεκτική ὡν τοῖς σκιαῖς σκιαῖς*, opposed to *αὐτῇ δικαιοσύνῃ*.

It may be permissible to add that in a paper read before the Oxford Philological Society in 1892 the writer maintained that the plural *γεωμετρίαι* in these passages in the *Republic* did not mean Plane and Solid Geometry, but acts or operations of Geometry, and related to *γεωμετρεῖν* just as *θεωρίαι* to *θεωρεῖν*: *γεωμετρία* by itself, and without qualification indicated by context, standing

normally for plane geometry. The plural *γεωμετρίαι* is thus exactly parallel to *λογοτροπίαι* with which it is in these passages associated. The same result, if not quite in

the same way, has been independently given lately by Dr. Adam in his edition of the *Republic*.

J. COOK WILSON.

ON A PASSAGE IN XENOPHON'S *MEMORABILIA*.

XENOPHON *memorabilia* A vi. 13 *Ω 'Αντιφών, παρ' ἡμῖν νομίζεται τὴν ὥραν καὶ τὴν σοφίαν ὄμοιώς μὲν καλόν, ὄμοιός δὲ αἰσχρὸν διατίθεσθαι εἶναι τὴν τε γὰρ ὥραν ἐὰν μέν τις ἀργυρίον πωλήῃ τῷ βούλομένῳ, πόρον αὐτὸν ἀποκαλοῦσθαι, ἐὰν δέ τις, ὃν ἀν γνῷ καλόν τε κάγαθὸν ἔραστήν ὄντα, τοῦτον φίλον ἔαντῷ ποιῆται, σώφρονα νομίζομεν' καὶ τὴν σοφίαν ὑσταύτως τούς μὲν ἀργυρίον τῷ βούλομένῳ πωλοῦντας σοφιστὰς ὥσπερ πόρονς ἀποκαλοῦσιν, ὅστις δέ, ὃν ἀν γνῷ εὐφύα ὄντα, διδάσκων ὃ τι ἀν ἔχῃ ἀγαθόν, φίλον ποιήται, τούτον νομίζομεν, ἢ τῷ καλῷ κάγαθῷ πολίτῃ προσήκει, ταῦτα ποιεῖν.

On this passage Mr. H. Richards (*Classical Review*, xvi 270) remarks: 'The point is not that it is equally creditable and discreditable to dispose of the two things, but that in both cases there is a creditable as well as a discreditable way of doing it, two possibilities with regard to each of them, set forth with correspondence of *μέν* and *δέ*. It follows that in the early part of the sentence we want adverbs, not adjectives: *ὄμοιώς μὲν καλός ὄμοιός δὲ αἰσχρός διατίθεσθαι εἶναι, εἶναι* meaning *it is possible*.' For the double adverb cf. Thuc. 2. 60. 6 οὐν ἀν ὄμοιώς τι οἰκείως φράζοι.' It is not quite clear to me how Mr. Richards understands *ὄμοιώς*: but I think that he would probably agree with me when I say that Socrates

distinguished between honourable teaching and dishonourable teaching on the same principle on which he distinguished between honourable and dishonourable love, and that *ὄμοιώς μέν, ὄμοιός δέ*, mark the identity of the principle. If so, both he and I dissent from Kühner, who translates 'apud nos existimatur et pulchrum et turpe esse pulchritudinem et sapientiam aliis venundare,' and makes *ὄμοιώς μέν, ὄμοιός δέ*, mean no more than 'pariter ac.' I am however of opinion that the meaning which I desire, and which I suppose Mr. Richards to desire, can be got from the ordinary text, and indeed that the ordinary text expresses that meaning better than Mr. Richards' emended text would do. I would translate: 'Our notion is that the communication of beauty and the communication of wisdom are creditable under the like circumstances, and that under the like circumstances they are discreditable.' This seems to me exactly the right sense. My objections to Mr. Richards' reading are, that, however he understands *ὄμοιώς*, first, it is not necessary to desert the tradition, and, secondly, 'εἶναι, meaning *it is possible*', is, not only superfluous, but even, by the substitution of 'may be' for 'are,' injurious to the sense.

HENRY JACKSON.

15 April, 1904.

NOTES ON THE TEXT OF DIONYSIUS HALICARNASSENSIS: *THE THREE LITERARY LETTERS*.

p. 701 (=p. 88 Roberts' text, line 15). Read ἄπαντας, ὅσοι τὰς αὐτὸν ἐπινοιαὶ εἰς τὴν κοινὴν φέρονταν ὀφέλειαν ἐπανορθοῦντες ἡμῶν <τοὺς> βίους τε καὶ λόγους. Usener inserted *τοὺς* before ἡμῶν: but the rule that pronouns of this class come outside the article is observed even in p. 756 (=p. 94 Roberts line 8) ἐᾶ γὰρ τὰς ἀλλας αὐτὸν γραφὰς παραφέρει, and unmistakably in p. 757 (=p. 96 Roberts line 2) καὶ γὰρ τὰ δόγματα

διέβαλον αὐτὸν τινες, and p. 783 (=p. 122 Roberts line 15) γνοίη δὲ ἀν τις αὐτὸν τὸν πόνον.

p. 780 (=p. 120 Roberts line 1). Read τῆς δὲ λέξεως γέ Θουκυδῆς κέχρηται τὸ μὲν σημεῖωδες καὶ τερέργον πέφεντεν (sc. Philistus), τὸ δὲ στρογγύλον καὶ πυκνὸν καὶ ἐνθυμηματικὸν μεμύηται. Krüger conjectured ἐκμέπακται: the MSS have μέμυκται. For the turn of expression then cf. Marcellin. 51

(quoted by Roberts p. 177 on p. 136 line 11) *τὰ πολλὰ καὶ τῶν Γοργίων μιμούμενος.*

p. 793 (= p. 136 line 19). Read γλωσση-
ματικά μὲν οὖν καὶ ἀπηρχαιωνένα καὶ δυσείαστα
τοῖς πολλοῖς ἔτι καὶ ὁ παράλογος. For
remarks by other Greek critics on Thucy-
dides' use of this word cf. Suidas s.v.
(Gaisford II. p. 2855) Παράλογος οὐ τ' ἄλλοι καὶ μάλιστα Θουκυ-
δῆς, τὸ παράδοξον κ.τ.λ. Παράλογος
Θουκυδίδης κ.τ.λ.

The MSS of Dionysius however are
divided: PCD read ἐπιλογισμὸς, G παρά-
λογισμὸς and the editor has courteously

pointed out to me what I had forgotten—that in *C.R.* 1902 p. 120 he proposed ἐπι-
θεασμὸς, working from the reading ἐπιλογι-
σμός. I had originally by an *obiter dictum*
called attention to the superiority as I styled
it of G, and, although this superiority is, I
think, demonstrable, the editor's suggestion
to me seems satisfactory—that καὶ ὁ ἐπι-
θεασμὸς καὶ ὁ παράλογος was Dionysius' own
text, and that this has produced our MSS
readings. It appears however to be worth
while to record the discrepancies of our
four MSS for this particular letter, the
second to Ammaeus.

p. 789 (= p. 130 line 10)	δὴ PGCD	δὲ accepted
line 13	αὐτὸν PCD	ἐμαυτοῦ G and accepted
(= p. 132 line 1)	παραθέσεων PGCD	προθέσεων
p. 790 (= line 9)	ἥξουν PGCD	ἥξιον
(= line 15)	μικρὸν PG	μικτὸν CD
(= line 19)	τῆς PD	τοῖς GC
(= line 21)	αὐτὸν P αὐτὸν GCD	αὐτὸν
p. 791 (= p. 134, 4)	ἴνα τὸ μὲν ὄνοματικὸν λέγηται PG	CD have been emended wrongly: editors insert a clause between ὄνοματικὸν and λέγηται
(= 13)	πρὸς τὸ σημανόμενον PG	CD have the correct text πρὸς τὸ σημανὸν ἀπὸ τοῦ σημανούμενον ὅποσα τε γίγνεται.
p. 792 (= 20)	ἀποστέγειν ἢ τα PGCD	

From this point, since it is clear that
PGCD are ultimately derived from one
source—sometimes illegible or erroneous—,

p. 793 (= 136, 8)	ἀκούεσθαι PG rightly)	(possibly ἀκούεσθαι CD
p. 794 (= 22)	πρεσβεύ εἰς P	πρέσβευσις GCD
(= 138, 7)	τισ σαν το P τις αὐτὸν D	τι εἰς αὐτὸν G
—	τι* αὐτὸν C	
p. 795 (= 22)	ὄνοματικὸς C ὄνομαστικὸς D	ὄνοματικὰ PG
p. 796 (= 24)	ἡν ἐν GCD (ι ἡ ν)	ἡ ἐν P
(= p. 140 line 3)	ἀπολοφύρεσθαι G	ἀπολοφύρασθαι PCD
p. 797 (= line 23)	ἐν omit PG	insert CD: and so p. 798 (= 142, 23)
(= 142, 1)	τοῦ ἐπιμιγνυμένον PG	τοῦ ἐπιμιγνύμενοι CD
p. 798 (= 13)	ἥνικα PG ¹	ἥνικα G ² CD
(= 15)	αὐτὸν PCD αὐτὸν G	αὐτὸν
(= 15, 16)	τῶ ἀθηναῖον G τῶν ἀθηναίων PD τὸν Ἀθηναῖον C	τῷ Ἀθηναῖῳ
(= 144, 5)	αὐτῶν GCD	αὐτὸν P (but both readings are defended by MSS of Thucy- dides)
p. 799 (= 9)	οιαν P οἰαν G	οἰον CD
p. 800 (= 146, 1)	οῦτως P οῦτω CD	οῦτως G
—	τὴν φράσιν CD	τὴν φράσει PG but expunged as a gloss by Usener and Roberts
(= 6)	τῶ τε G ₁ τό τε PCD	τῶ τε
p. 802 (= 148, 13)	καὶ PG	καὶ τὸ CD
(= 16)	σημανόμενον PG	σημανόν CD
p. 803 (= 150, 9)	ἔλασσον PG ἔλαττον CD	ἔλάσσον'

p. 804 (= 19)

δ ἀνάγνωσιν Ρ ἀν γνῶσιν GCD ἀν γνῶσιν [which throws light on the correctness of P in 796 (= 24)]

p. 805 (= 152, 15)

ον ποτέ Ρ ἄμα τειχιστῶν Ρ ἄμα ἀτειχίστων GCD

(= 16)
(= 21)

ἄνομοίς ὡς Ρ ἀν δόμοίς ὡς G

οὐτε κατὰ θάλατταν om. PCD

τε PCD

ώστῶν PG

p. 806 (= 154, 10)

όρωμένους φησὶν PG

p. 807 (= 154, 19)

ἐπικρίναι PGD ἐπικρίναι C

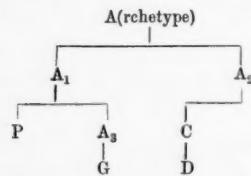
(= 156, 5)

τούτουν τῶ P

p. 808 (= 11)

τούτων δὲ GCD

Without here considering the relations of C and D—page 798 (= 15, 16) seems to show that C is copied from D—it is evident that they follow one line of textual tradition, while P and G also are closely related. Since P is of the tenth or eleventh century, it is generally supposed that G—copied in the sixteenth—is a copy from it. But a consideration of p. 798 (= 15, 16), p. 800 (= 6), p. 804 (= 19), p. 805 (= 21), and especially of the readings in p. 794 suggests the propriety of provisionally arranging the pedigree of these MSS thus:



where A, A₁, A₂, A₃ are MSS now lost but imaginable as ancestors. If this hypothesis be sound, we may next ask whether G or P is more generally correct. Disregarding those readings in which PG agree, an examination shows that even if we give P the benefit of the doubt in p. 796 (= 140, 3), yet (reckoning $\frac{1}{2}$ for a reading which preserves the vestiges of the true reading where other MSS fail) we can only credit P with 3 successes, as against 11½ for G. It is therefore fair to claim for this MS greater attention than it has hitherto re-

ceived. Had G preserved παράλογος, I should have been inclined to reject the addition of ἐπιθεασμός; as it is, it is more reasonable to suppose its παραλογισμὸς a valuable testimony that the united witness of the other MSS to ἐπιλογισμὸς is not the last word, but that either ἐπιθεασμὸς was also in the text or that the common παραλογισμὸς was felt to be insufficiently uncommon and was corrected into ἐπιλογισμός. It should be pointed out as having some bearing on the probability of ἐπιθεασμὸς that practically all Dionysius' examples are drawn from the first book of Thucydides, only one or two from Book IV.

In conclusion two oversights in Roberts' edition may here be pointed out. In p. 762 (= 102, 1) παραδέγματα δὲ τὴν ἴσχυνται καὶ τὴν ὑψηλῆς λέξεως ἐξ ἐνὸς βυθίσαν τῶν περιβοήτων παραβήσομαι, the reading ποιήσομαι for which the editor gives παραβήσομαι is supported by ποιῶμαι in *de adm. vi dic. in Demosth.*

In p. 784 (= 122, 23) οὐ γὰρ οὐτως ἔχει, ἀλλὰ πᾶσαν ὡς ἔτος εἰτεῖν ὠφέλειαν παρέχει, we cannot give as in p. 784 (= 122, 28) τούτους τούνν ἄπανταν ἀφονίαν δέδωκεν the sense of 'complete' or 'greatest' to πᾶσαν when qualified by ὡς ἔτος εἰτεῖν. Hence the reading of the MSS πᾶσαν should be retained against Herwerden's emendation, and the sense is 'Theopompos' work is of use to practically everybody.' In p. 64 (= 102, 6) correct ἐκπίπτον in Roberts' edition.

T. NICKLIN.

PROHIBITIONS IN GREEK.

In the *Classical Review* for July 1903, xvii 295, Mr. W. G. Headlam writes 'μὴ τοῦτο ποιεῖ is "do not do as you are doing," "do not continue doing so," "cease to do so":'

and in a note he adds 'This I had from Dr. Henry Jackson years ago, who had it as he told me from Shilleto, who derived it probably from Hermann; see the quotation

from him in Greg. Cor. p. 864.' Mr. Headlam is mistaken in thinking that I learnt this truth from Richard Shilleto. I owe much to that excellent scholar: but it was the late Thomas Davidson, and not Shilleto, who explained to me this usage. Davidson told me that, when he was learning modern Greek, he had been puzzled about the distinction, until he heard a Greek friend use the present imperative to a dog which was barking. This gave him the clue. He turned to Plato's *apology*, and immediately

stumbled upon the excellent instances 20 ε μῆ θορυβήσῃτε, before clamour begins, and 21 ο μῆ θορυβεῖτε, when it has begun. Ever since Davidson explained the distinction to me, I have kept a watch upon instances of particular prohibitions, and I am convinced that the rule holds. I did not know of Hermann's admirable statement until Mr. Headlam called attention to it in the *Classical Review*.

HENRY JACKSON.

15 April, 1904.

REVIEWS.

NAIRN'S HERODAS

The Mimes of Herodas. Edited with Introduction, Critical notes, Commentary, and Excursus by J. A. NAIRN, M.A., Headmaster of Merchant Taylors' School. Pp. lxxxviii, 116. Oxford: Clarendon Press. 1904. 12s. 6d.

THE actual gain accruing from this edition to the text and interpretation of Herodas is as follows: in I. 82 Mr. Nairn has restored οὐ π[αρ]λάττ[ει]1 πείσονσά σ' ἡλθον 'it was not to induce you to go astray that I came.' Successive scrutinies of the papyrus had approximated to this reading, which I do not doubt myself is right. But I doubt whether he has solved the very uncertain traces at the end of VII. 69 by reading εἰ τοῦτο ὀκνεῖς γὰρ οὐ σε ἥγδοι' ὡς κρῆναι 'if you object to this, it is not easy to conclude a bargain so'; for what is 'so'? Does it mean 'not easy for you at that rate (οὐτῷ, τοῦτο ποιῶντα) to give your ratification'? Or 'not easy for you to determine to that effect'? The last gives no sense, so it must be the first; but Mr. Nairn should have explained, and endeavoured to remove our scruples about this use of ὡς. His other conjecture τελῶ δραχμήν in II. 8 I shall speak of presently. This edition also incorporates for the first time on pp. 99–100 the fragments received by Mr. Kenyon in

1900: the new scraps fitted into VII 22–4 will be discussed hereafter; that inserted into VII 8–10 I will mention here:

μᾶλλον δὲ τὴν ἄκανθαν ὡς ἔχει κάλη
ἔκ τοῦ τραχήλου δῆσο[ν].—εἰ[τα] δῆ, [Κέρκω]ψ,
κίνει ταχέος τὰ γούνα, [μέζον] [η] δεῖ σε
τρίβειν ψοφεῦντα νονθ τῶνδε.

Crusius in his last edition (1900, p. 74) does not venture to adopt his conjecture that this scrap belongs to this place, and Mr. Nairn does not say whether it is certain. But ΑΔΗ makes it seem so, because εἰ δῆ is just the right phrase here and had been already conjectured by Diels, which was worth mentioning. The other lines, however, can hardly be right yet; no one could write μέζον' η unless he meant 'greater than': there are many possibilities; τώνδε might depend on μέζονας (τέδας) or agree with νονθετημάτων, or μέζον ψοφεῦντα might mean 'louder.' The first line I had been supposing meant 'tie the teasel to his neck,' to keep his head from nodding; but Mr. Nairn suggests that the meaning is 'fasten his back-bone by the hump to his neck, just as he is.' In III. 80 Mr. Nairn takes φέρειν to mean 'you must endure,' which may be right; certainly the scribe would seem to have understood it so.

For the rest, Mr. Nairn's object has been to 'embody the results of the constant attention paid to this author during the past twelve years,' and with this object he has 'searched' the various periodicals 'as carefully as possible for everything bearing on the text or its interpretation.' This is a useful service; and what perhaps

¹ Mr. Nairn thinks that the Attic form in this and other words is from Herodas' hand. The matter is of small importance, but I think it highly improbable Herodas should have written so. Judgment in textual criticism depends on knowing what were the habits of scribes generally, and such forms as πράττειν, γλῶττα were occasional inadvertences in Tragedy.

eventually will prove more useful still, he has given a Bibliography of these scattered publications. It is out of these that the Introduction is composed, endeavouring to blend a variety of opinions into a harmonious whole. A literary judgment formed with these resources naturally suffers from its composite origin; but at any rate there is something here from everyone who has said anything about Herodas. Whether they will all be satisfied with the way their views are represented is another matter, and I cannot feel assured, I judge by the excerpts from my own article in the *Encycl. Brit.*; e.g. on p. xi:

They are written in the language of the common people, with its colloquialisms, vulgarisms, and a large number of proverbs, the features which are characteristic of that language, and which we find reflected, e.g. in Petronius and the Pentamerone. It is clear that Herodas, besides his personal observation, has drawn from literary sources, notably Hippoanax, Sophron, and Aristophanes. However, in the manner in which he casts old material into novel form upon a small scale, and under strict conditions of technique, he is entirely Alexandrian, and reminds us of nothing so much as the epigrams of the Anthology, notably those of Asklepiades, where the qualities are those of the best work in miniature.

These sentences, except what is printed in Italics, are from different parts of the article, and the manipulation of them has played havoc with my meaning. The language of Herodas is for the most part that of the later Comedy, translated, so to speak, into the Ephesian Ionic of Hippoanax; thus, as Mr. Nairn says on p. xxxi—it was my observation—the choice of form and words is Ionic, but the structure of the sentences is essentially Attic. Then Mr. Nairn tells us that though Herodas draws from literary sources, he is, *however*, entirely Alexandrian. Surely, if there is anything characteristic of the Alexandrians as a school, it is that their literature is a *bookish* literature, and requires a knowledge of previous literature in the reader. And in mentioning Asklepiades I took his epigrams as an example of that firm clarity of outline which is so marked a quality in the best writers of the period. But to say that Herodas reminds you of nothing so much as the Anthology in general is like saying he reminds you of the 'Poet's Corner' in the daily papers.

The illustration is drawn mainly from two sources, Crusius' *Untersuchungen* (1892) and a paper of mine in *C.R.* 1899 p. 151 to which Mr. Nairn fully acknowledges his debts. It was written after I had read nearly the whole of Greek literature and a good deal of Latin with this special object,

and I mention this because, with that material at my command, the nakedness of the land in the present case is somewhat unfairly evident to me. Mr. Nairn's contributions in this field are limited to a few grammatical observations, such as are hardly, to my mind, what are wanted. For example, in

II 21 *εἰ δὲ οὐνεκεν πλεῖ τὴν θάλασσαν . . . βῆγ τιν' ἀξεῖ τῶν ἔμων, ἐμ' οὐ πείσας, καὶ ταῖτα νικτός,*

there are two little touches the absurdity of which would have been caught by a Greek audience, and they are intended to suggest the ingenuity of advocates in twisting arguments to serve their turn. So far from a sailor's life being thought enviable, it was proverbially unhappy: *ὅ μὴ πεπλευκώς οὐδὲν ἔρακεν κακόν* Poseidippus Ποροβοσκός (in which the same pair of characters were probably at variance), Stob. *Flor.* 59. The humour of *καὶ ταῖτα νικτός* lies in this, that it would certainly have been urged as an aggravation of the offence if it had been committed in the *day-time*, as by Dem. *Meid.* 47: cf. Ter. *Adelph.* 470: in that case Thales would have been stigmatised as *κωμάζων μεθ' ἡμέραν*, an admitted reproach. It is merely rhetorical, as in Lysias *πρὸς Σύμωνα* 6 and 23. These are examples of the points Herodas makes so quietly; and the reader is not in a position to appreciate Herodas unless he knows enough to recognise them. But Mr. Nairn does not put the reader in that position by remarking *πλεῖ τὴν θάλασσαν*. A common phrase: cf. etc.: 'καὶ ταῖτα νικτός, *idque, et id* are similarly used in Latin.' Then at 46 *ἐπὶ τὴν δὲλεύθερός τις αἰκίσῃ δούλην, διπλῶν τελείω* the intelligent schoolboy will enquire 'why διπλῶν?' and will only get 'Cf. v. 54 for predicative use of adj.' Again, on VII 88 we read: 'The use of *οὐ* in Prose and Comedy is circumscribed within narrow limits, as in stereotyped expressions like the present; T. Mommsen, *Beiträge zu der Lehre von den gr. Präpositionen* (1895).' If the theme were Attic Prose or Attic Comedy, this might find a place, but it has no place in Herodas, especially when space is found so grudgingly for explanation.

If Mr. Nairn had only been content to claim no more for his edition than the value that it has as a rapid compilation with a provisional text for the purpose of a class-book, it would have been possible to consider it as such: but he has injudiciously made use of phrases which should lead a student of literature to expect a good deal more than

he will get. 'It has been my aim' he says 'to give the student all needful assistance towards the correct interpretation of this difficult author.' I am bound therefore to express my opinion that the interpretations are often incorrect, that often the best readings are not mentioned, that in the Introduction especially there is much which is trivial and superfluous, while what really wants doing for Herodas has not yet been done.

With regard to the MS. too, when Mr. Nairn says p. lvii, 'The use of the square brackets in the text renders it easy in all cases to distinguish these restorations from the words actually preserved in the text,' I am bound to warn the reader that there are many places where he would be unwise to rely on this assurance. For example, at II 8 Mr. Nairn gives a conjecture of his own :

τελῶ δρα]χμήν μέρος τι τῆς [πό]λεως κῆγά·

It is in speaking particularly of this passage with a few others on p. lvii that Mr. Nairn says 'I have made the fullest use of the papyrus itself.' Now Mr. Kenyon originally gave

μεν . . . τι τῆς [πο]λιος κῆγα·
and from the papyrus itself I could get nothing more for certain positively. But it is certain that what Crusius conjectured, *μέρος*, is *not* the reading of the MS.; where Mr. Kenyon gave 5 letters at the beginning Mr. Nairn supplies 8, and all that Mr. Kenyon can say for this conjecture is that the letters *XMHN* are quite possible, though the *η* is not quite clear. The first letter might be *X*, but to me, as to Blass, it looked more like *C* with the relic of some previous letter; and in *C.R.* xiii. 151 I said 'The facsimile shows me *CMENIHΔΕCTITHC* which implies some form of δυσμένεια, e.g., ἐν δυσμενείῃ δέστρι τῆς πόλιος κῆγά·' quoting Mr. Kenyon's opinion on it, 'ΔΥ]CMENIHΔΕCTI suits the remains in the MS.' It is easy to see what this would mean, for both Battarus and his opponent are *μέτοκοι*, and as a class both the *πορνοβούκοι* and the *ἐμπόροι* were regarded with disfavour. Mr. Nairn should certainly have mentioned this.

One department I should not have mentioned if Mr. Nairn had not laid special stress upon it: 'In particular I have endeavoured to assign priority in regard to emendation to the proper quarter.' I am the last to complain of editors making mistakes in that troublesome business, but it is

just a matter which Mr. Nairn, in going through the periodicals, had the opportunity of setting definitely right: if, however, he has done so in some cases, in others he has merely copied the mistakes of Crusius, and through reading Crusius carelessly has imported new ones of his own: thus in II 78 λέοντ' ἄγχοιμ' ἄν (which is right, I think; it implies 'I am as bold as Heracles with the Nemean lion') is due to Kaibel, *κεῖσθαι* in VI 5, though I made it independently with the illustration, was suggested first by Mr. Richards, in VII 72 νοστὴν πεποίκην was Diels' conjecture, πεποίηται merely my correction from the MS., οὐ μακρὴν ἀποκισται was proposed a month before me by Danielssohn; it is a common phrase and more likely than ἀποσκηνοῦ: but ἀπήλλακται (Blass) means 'divorced from,' 'alien to.' On the other hand I can claim the suggestion that 'Α' in I 25 means λέπται, and the readings αι πότναι in III 98, Κέρκωψ in VII 9, τὴν κόννιν ἀποψήσω in 13 (where I think, however, that Diels' τὴν ἔδρην is more likely; e.g. κίνει τάχι, η σεν τὴν έ. a.), Μητροῦ in 14, and δεῖ μάλιστ in 54. Prof. Buecheler in his edition avowedly did not name the authors of conjectures which he mentioned, and has consequently been credited with many which he did not originate or claim to have originated.

I will now take single passages from the two first mimes. Upon the rest I hope to make some comments on a subsequent occasion.

I 7 Mr. Nairn divides the words in the right way, ΜΗ. κάλει τίς ἔστι; but can hardly be right in preferring the translation 'Call out: who is it,' to 'Say I am at home.' Visitors were not admitted till invited; κάλει or κάλεσον without the preposition (*fairent entrer*) was the word used, *Plat. Charm.* 212 c, *Philostr. Apoll.* i. 29, *Charito* 3. 1 and 8. 2, and a slave could not have understood it otherwise. It was not worth recording Buecheler's view that κάλει is said by Gyllis: a visitor says ἄγγελλε or ἄγγειλον, it is for the master or mistress to give the invitation.

I 10 πέντε μῆνες ἐξ οὐ σε οὐδὲ ὄναρ εἰδέ τις.

'This expression is usually found in negative sentences.' To take this for an affirmative sentence was a slip of Dr. Rutherford's; οὐδὲ ὄναρ could not be anything but negative. They are misled by the English idiom: where we say 'It is five months since I have seen you,' Greek and Latin and other languages say 'It is five months since I have not seen you,' as *Theocr.* ii. 4, 157,

Lucian i. 741, Plaut. *Most.* 460, Pompon. ap. Gell. x. 24. 5, Propert. iii. 8. 33, 13. 21: we might take Theocr. xiv. 45 in the same way. πέντε μῆνες εἰσιν ἐξ οὐ σε ὄρῳ means in Greek 'I have been seeing you continuously for five months.' Mr. Nairn has not observed my correction of this error in the *Athenaeum* of 1891.

I 18 I am glad to see Mr. Tucker's οἴη τ' ἔτ' εἰ γάρ adopted: cf. Hdt. iii. 28, Pausan. iv. 9. 4, and the famous question in Plat. *Rep.* 329 c.

I 19 Mr. Nairn punctuates with the majority σιλλανε ταῦτα τῆς νεωτέρης ὑμῶν πρόσεστιν comparing V. 29, which is different. When spoken with ironical defiance, the imperative in Greek and Latin, both in the 2nd and 3rd person, was used absolutely; e.g. ὑβρίζε *Med.* 600, Soph. *El.* 794, Ar. *Vesp.* 1441, δράω *P.V.* 971, ὁ δ' οὖν ποιεῖτο 967. Hence in *Med.* 1363 Weil rightly reads στόγει and in *Alexis* 172, I punctuate B. ἀνθρωπε ποίει! as in 14 ἀνθρωπὸς ἐπίπαζε! Aesch. *Theb.* 1036 τράχνε! And Eur. *fr.* 629 may have been <πρὸς ταῦτα> or <πίμπρη τε> καὶ κάτατε χῶρι λῆσ ποίει, as *Ion* 539, *Andr.* 258, Ar. *Thesm.* 749, but not, as Meineke, πίμπρη με. Usage is equally decisive that ταῦτα belongs to πρόσεστι.

I 28 'Εἰδήν, 'peace': an Alexandrian use of the word. Cf. the Rosetta stone, τὴν Αἴγυπτον εἰς εἰδίαν ἀγαγεῖν.' This is what Weil suggests; at the same time the literal sense of the word is not excluded, for the calm and settled climate of the country was notorious: Lucian ii. 361 of Ethiopia αἰὲν γὰρ σφέας εἰδίη καὶ γαληνή περικέαται: the εὐκρασία of Egypt, Callixenus in Ath. 196 D, Diod. Sic. I p. 13. Dio Chrys. I 361 Egypt like the Elysian plain, I 671 εὐκρασία among the boasts of the Alexandrians.

I 29 'νεανίσκοι. Probably the young courtiers of Philadelphos are meant. Cf. Suidas βασιλεῖοι παῖδες . . .'. This is Meister's view, who also cites Polyb. v. 82. 13 τῶν βασιλικῶν τυν παῖδων, and I suspect is right: these *pueri regii* (Livy 45, 6) were an institution of the Macedonian court and served as the King's pages; they are called βασιλικοὶ νεανίσκοι by Plut. *Mor.* 760 B and correspond to the νεανίσκοι of Daniel i. 3.

I 42 κεῖνος ἦν ἔλθη
κάτω, τέθηηκ'. οὐδὲ εἰς ἀναστήση
ἡμέας, γύναι: τὸ δεῖνα δ' ἄγριος χειμῶν
ἔ[ε]ν[δης ἐνέπ]εσε.

κεῖνος, Mr. Nairn says, is probably Mandris, but he does not explain what is the

force of the argument which his conjecture gives to Gyllis, 'If your husband comes below, he is dead.' One would expect her argument to be, 'you can only have one life, and had better enjoy it while you may.' There is no mention of the view which suits that argument, the view of Crusius that κεῖνος is used *omnis causa* for Death, like A.P. xi. 13 ἐξαίφνης ἡξεὶ ὁ πορφόρεος. I think that must be right, and there may be, as Cobet thought (N.L. 125), a case of the same thing in Anaxippus (Ath. 404 c), a cook speaking: ὅταν ἐγγὺς ἦν δ' ὅδης ὑπέρεος, ἀρτών φακῆν | καὶ τὸ περιδειπνον τὸν βίον λαμπρὸν ποιῶ: *satis appareat eum dicere voluisse ὅταν ἐγγὺς ἦν τὸ χρεών, δ' θάνατος, et hac εὐφημίᾳ usum arbitror ut dixerit δός ἔτερος.*' Rather, perhaps, he would have said ὁ γ' ἔτερος, or some adjective as ὁ δυνέρος (δύνερον θανάτον Kaibe! *Ep.* 153), ὁ στυγερός.

τὸ δεῖνα, which Mr. Nairn gives as legible in the MS., he explains to mean 'By the bye,' a phrase which would come very oddly here.

I 61 ἀλλ' ὁ τέκνον μοι Μητρίχη, μίαν ταύτην
ἀμαρτίνην δός· τῇ θεῷ κατάρτησον
σαντήν.

Certainly there is no reason to read Μητρίχη, τῇ μίαν ταύτην, but Mr. Nairn defends the text by referring to examples in Goodwin's *Greek Grammar* where 'the demonstrative is equivalent to *here* or *there*.' That is not the right account; in τῇ μίαν ταύτην we have merely descriptive adjectives; in μίαν ταύτην without the article (a far more common form) we have a predicate in apposition, 'let this be one transgression granted.' τῇ θεῷ κατάρτησον σαντήν Mr. Nairn explains to mean 'attach yourself to Aphrodite,' a construction which I think he will not find in Greek; they would at least have said ἐκ τῆς θεοῦ as Plut. *Marcell.* 8 κατάρτησεν ἐξ αὐτοῦ τὰ λάφυρα: but κατάρτησον 'to hang down' is not used in the metaphorical sense; we should have had ἀρτησον or ἐξάρτησον σαντήν (ἐκ τῆς θεοῦ or ἀνάρτησον σαντήν τῇ θεῷ or εἰς τὴν θεόν. So κατάρτησον σαντήν must be taken in the sense of κατάρτησον σαντήν, i.e. σωφρόνισον σαντήν, *discipline, school yourself, be sensible, docile, be not froward, contumacious, μή τὰ θεῖα ἀγνωμένη, μή θεομάχει*: I have indeed suggested that κατάρτησον should be read; the ν in this verb is habitually corrupted to η or ι; but κατάρτησον is possibly Ionic in the same sense. If we take μίαν ταύτην ἀμαρτίνην δός τῇ θεῷ together, it is easy to

understand 'Grant the Goddess this one indiscretion'; e.g. Ach. Tat. v. 26 where Melitte pleads *νόμιζε οὖν τὸν Ἐρωτα δὲ ἐμοῦ λέγειν ἔποιον* *χάρισαι τοῦτο*, Κλειστοφῶν, τῷ σῷ μνσταγωγῷ: also my husband is providentially away.' 'And I was really afraid,' says Clitophon, *ἔφοβήθη τὸν Ἐρωτα μῆ μοι γένηται μήνυμα ἐκ τοῦ θεοῦ*.—Perhaps this may be the meaning of Gyllis' excuse in v. 82 that she only came *ἔκηρι τῶν ἵρων* (!), i.e. because *τὰ τῆς Ἀφροδίτης* *ἴέρ* ἀνορύαστά *στοι* *χρόνον* *τοσοῦτόν* *ἔστι* (cf. Musaeus, 141-147), where Mr. Nairn's suggestions are that perhaps some particular festival of Aphrodite may be meant, or that Gyllis merely said the first thing that occurred to her in her confusion.—I do not know what to make of Mr. Nairn's comment on this punctuation: 'Others punctuate after *θεῶ* instead of after *δός*, taking *ἀμαρτίνη* *δός* *τῇ θεῷ* together, and translating *κατάρτησον σαντήν* by "watch yourself," "prends garde." *καταράθω* = *σωφρονέν*, cf. Hdt. iii. 80, ix. 66 (v. Herwerden, *Lexicon Dialecticum*, s.v.).'

66 *πείσθητί μεν φιλέω σε ναι μὰ τὰς Μοίρας.*

'*φιλέω σε.* *Amo te.* In vii. 4 *ἔγώ φιλώ σε* is taken by some in this way as a formula of welcome.' But wrongly there, and welcome is wholly inappropriate to this place, and *amo te* is not a formula of welcome; it means 'Thank you,' 'I am grateful, obliged to you' for having done this. 'Please' is *amabo*, 'I shall be grateful' if you do this: the difference is well shown by Plaut. *Poen.* 250 AD. *soror, parce amabo.* AN. *quiesco ergo.* AD. *amo te.* But neither 'Please' nor 'Thank you' is the meaning here: what Gyllis means is 'I speak as a true friend, for your welfare,' the same language as is used by the *προαγόρος* in Ov. *Met.* xiv. 675 *sed tu si sapies, si te bene iungere animumque hanc audire voles, —quae te plus omnibus illis, plus quam credis, amo, —vulgares reice taedas Vertumnunq[ue] tori socium tibi selige;* and by Plangon urging Callirrhoe to *έκτρωσι* in *Charito* ii. 10 *ἔγώ δέ σε φιλοῦσα συμβούλευντα λαληθή.*

I 73 οὐδὲ ἀντις ἔστι με μηδὲ ἔν, φίλη, τοῖον φέρουσα χώρει μῦθον ὃς μιτρήμασι πρέπει γνωμένι, ταῦς νέας ἀπάγγελλε τὴν Πυθέω δὲ Μητρίχην

'*μιτρήμασι.* Cf. Servius *ad Aen.* iv. 216 *Multa lectio mitras proprie metreticum esse docet.* So Pollux iv. 151 *διάμιτρος ἑταίρα.* These are what Buecheler cites in support of his conjecture *μιτρήμασι.* The form *μιτρῆς* may no doubt be admitted as Ionic for

μιτρᾶς, which is not recorded, but I can restore it: Hesych. gives *μιτρέον*: *ποικίλον*, which should be *μιτρᾶν*: *ποικίλον*, i.e. like a *Λαδία μιτρά*, which Pindar N. 8. 15 uses metaphorically, *Λαδίαν μιτρᾶν καναχῆδα πεποικιλμέναν.* It does not seem likely that *μιτρᾶς* would be applied to a *person* in the sense *ποικίλος* 'wily'; and indeed Buecheler takes it to mean 'mitred' here, for which we must remember that Greek said usually *μιτρήφορος*. The *διάμιτρος ἑταίρα*, Pollux tells us in iv. 154, *μιτρά ποικίλη τὴν κεφαλὴν κατείλαπται*: but I must confess that *multa lectio* leaves me very doubtful whether the class of *ἑταίραι* or *μαστροποί* could be specified by the epithet *μιτρήμασι* or *μιτρηφόροις*.

When *μιτρά* is symbolical in Greek, it means the *girdle* as the symbol of virginity; but allowing it to mean a *turban* here, 'turbaned women,' I imagine, would mean nothing more distinctive than 'old women,' and in that sense I prefer the other reading *γρήμασι*, for *μῦθον ὃς γρήμασι πρέπει γνωμένι* is *μῦθον γραοπτερῆ* (Damascius) or *μυθάριον γραοπτερές* (Michael Syncell.), which admirably suits *ταῦς νέας*, for a *γραῶν* or *τιτθῶν μῦθος* was that told by old wives and nurses to the young. I take it that Metriche's answer is the same as Arachne's in Ov. *Met.* vi. 37 to Pallas in the disguise of an old woman: *mentis inops longaque venis confecta senecta, et nimium vixisse diu nocet: audiat istas si qua tibi nurus est, si qua est tibi filia, voces.* The exact reading (*ὅς μὲν γρήμασι or what else*) is complicated by the doubt whether *μηδὲ ἔν* is adverbial or not.

78 ἀλλ' οὐδὲ τούτων, φασί, τῶν λόγων Γυλλίς δέπται.

A later hand in the MS. has corrected *οὐδὲ* to *οὐχί*: rightly, I think, for *οὐχί* is not uncommonly corrupted, and *οὐδὲ τούτων* could only mean 'not even these,' which gives no sense. Mr. Nairn, however, keeping *οὐδὲ*, takes it as though we had *ἀλλ' οὐδὲ Γυλλίς*: 'οὐδέ. Metriche did not want to listen to Gyllis; neither (οὐδέ) does Gyllis on her part wish to hear more than "yes" or "no".' That is quite impossible. The meaning surely is 'But that's not the sort of talk, as they say, that's wanted, Gyllis,' or 'that Gyllis wants to hear,' *φασί* being added because this was a formula for changing an unpleasant subject, like *ἀλλα λόγα* in Modern Greek, *ἄλλοι λόγον μένηστο* P.V. 538, *Hel.* 120, *φέρε λόγων ἀψώμεθ' ἄλλων Ιον* 556, *ἀλλὰ τούτου μὲν τοῦ λόγου μηκέτι*

¹ Lucian iii. 450 *ταυτίας κατειλημένος τὴν κεφαλήν.*

μνησθῆς Hdt. 7. 159, δεῖ δ' οὐ τοιούτων (ἐπῶν)
O.T. 406.

The emphasis is determined by the position of the words, and I am obliged to insist upon this matter until it becomes recognised, because it is so important. In VII 5 Mr. Laird punctuates with Crusius Δρυιδῶν φωνέων πάλιν καθεύδεις; though it is not the second but only the first time that the order has been given. What however makes it certain that the somnolent slave—an established type—is addressed with πάλιν καθεύδεις; ‘asleep again!’ as another in Anaxippus is addressed with πάλιν ὑπερέπεις: ‘late again!’ is the position of the words: ‘I say again!’ would have been πάλιν φωνέων, as in V 47. Again, in V 77 ἀλλ’ ἐπειτέρα οὐκ οἶδεν ἄνθρωπος ὁν, ἔωντὸν αὐτίκ’ εἰδότει (as Mr. Laird punctuates it) would mean ‘he shall soon know himself’: it should be ἀλλ’ ἐπειτέρα οὐκ οἶδεν, ἄνθρωπος ὁν, ἔωντόν, αὐτίκ’ εἰδότει ‘he soon shall.’ There is another violation of this principle in VI 31.

II 1 τῆς γενῆς μὲν οὐκ ἔστε
ἥμεων κριταὶ δῆκουσθεν οὐδὲ τῆς δόξης,
οὐδὲ Εὐθαλῆς μὲν οὐτοῦς ἀξίης τὴν μηνῦ
ἔχει ταλάντων πέντε, ἐγὼ δὲ μῆνς ἀρτους,
δίκη ὑπερέχει Βάτταρὸν τη πημήνας·

This would mean 'nor . . . will he get the better of me in law': but surely the construction of the sentence must be as Dem. 1070. 17 ἔστι δὲ ὁ νῦν ἀγών καὶ ἡ διαδικασία οὐκ εἴ τις ἔπειρος πρότερος ἡ ὑπέρτερος τέθηκεν, ἀλλ' εἴ μη προσήκει ἔξελαθῆναι, 791. 17 οὐ γάρ, εἴ μη πάν τὸν ὄσον ὥφλειν ὀφείλει, νῦν ἡ κρίσις οὐδὲ ὁ λόγος ἔστιν, ἀλλ' εἴ ὀφείλεις 'the question before you is not (μέν)' our relative γένος or δόξα or πλούτος, but whether Thales is to wrong Battarus with impunity,' ἀλλ' εἴ ὑπερέξει, or as one would rather expect, ἀλλ' εἴ παρέξει . . . δικρν or the like; the mistake is common.

In v. 15 *στενῶς* (Blass) *τεθώρηγμα* could not, I think, mean 'I am closely protected'; *στεγνῶς* could. Cf. Callim. *h. Del.* 23.

44 μὴ πρός τε κυπόσ, φησί, χώ τάπης ἦμιν
τὸ τοῦ λόγου δὴ τοῦτο, ληῆς κύρση.

Mr. Nairn thinks that the reference is to a man who was robbed of his blanket and then tossed in it. This is based on a suggestion tentatively thrown out by Crusius in 1892 that there might possibly be some connexion between this passage and the description of tossing in a blanket in Libanius iii. 259—a prank which will be remembered by readers of *Don Quixote* and of *Tom Brown's Schooldays*. But there is nothing there about stealing a blanket, and

nothing in Herodas about tossing. Mr. Nairn translates it 'lest my πρωκτός suffer, and furthermore my blanket be stolen,' as if the Greek were μὴ ὁ τέ κυνός καὶ ὁ τάπης γε πρός or καὶ πρός ὁ τάπης: but Buecheler's rendering is not more possible, *ne insuper etiam culus praeter stragulam*, for πρός cannot come first as though it were σύν. 'There is no difficulty,' says Mr. Nairn, 'about the separation of φησί from its subject,' which he takes to be τὸ τοῦ λόγου δῆ τοῦτο. But where does he find an example of φησί τοῦτο δῆ τὸ τοῦ λόγου? τοῦτο δῆ τὸ τοῦ λόγου and τὸ δῆ λεγόμενον τοῦτο and the like occur innumerabley, but they are used in apposition, not as a subject to a verb. φησί here could only mean *ut aiunt*, which seems unlikely when τὸ τοῦ λόγου δῆ τοῦτο follows. φησί, then, is not improbably corrupt. Now κυνός is masculine (VIII 4 and elsewhere), therefore it is not governed by πρός: it remains that πρός can only stand in *tmesi*; but προφῆσι gives no reasonable sense: it follows that it is corrupt, and therefore I read μὴ πρόσθε κυνός φθῆσι, or better, perhaps, μὴ πρὸ ὁ τέ κυνός φθῆσι i.e. προφῆσι, and explain the passage by Lucret. iv. 1026 etc. taking κυνός to refer to the ὅπῃ of the κλεψύδρα just mentioned. I am strengthened in this view of the meaning by a riddle in Eubulus (II. p. 202 K.) on a κηρός or κηρίς, the plaited funnel-shaped instrument, perforated from top to bottom, through which the voting-shell was passed into the urn:

ἔστιν ἄγαλμα, κεχρηὸς ἄνω τὰ κάτω δὲ μεμυκός,¹
εἰς πόδας ἐκ κεφαλῆς τετρημένον ὃξεν διαπρό,
ἄνθρωπους τίκτον κατὰ τὴν πυγὴν ἐν
έκαστον.

To this conjecture Mr. Nairn objects that 'the changes made in the MS. reading are extensive, and the form $\phi\theta\bar{y}\sigma i$ requires more support than the solitary $\bar{t}\bar{\omega}\mu i$, iii. 43.' Why, $\phi\theta\bar{y}\sigma i$ is in Hom. Ψ 805, and in iii. 43 Mr. Nairn himself accepts the reading $\bar{t}\bar{\omega}\mu i$ without question, saying merely 'For the termination $-\mu i$ of the first pers. sing. of the subj. (common in Homer) cf. Monroe, *Homeric Grammar*, § 82.' Now, as every Homeric scholar knows, the subjunctive in $-\omega\mu i$ hardly survives at all in the MSS. of Homer, having been corrupted to $-\omega\mu i$ or $-\omega\mu\alpha i$ (as in Σ 63, the only other place where $\bar{t}\bar{\omega}\mu i$ is found, there is a v.l. $\bar{t}\bar{\omega}\mu\alpha i$, while

¹ At any rate, if the MS. had this (which agrees with schol. *Vesp.* 99) instead of *βεβηκός ἄνω τὰ κάτω δὲ κεχηγός*, no one certainly would ever have found any difficulty. Plat. *Rep.* 529 B has the words *ἄνω κεχηγώς ή κάτω συμμεμυκάς*.

most have ἴδωμι); though it has been restored by Aristarchus and modern critics in many places against the MSS. But if we grant Herodas to have used ἴδωμι, there should be no hesitation in allowing him -γοι in the 3rd person, for that was always recognised as an Ionicism: see Lobeck *Path.* ii. 263 sqq., Bergk *P.L.* III.⁴ 240, Monro *H.G.* §§ 81, 82, and add διὸς ἀν λάχησι from Bacchylides (Ionic metre). ἴδησι therefore might well be right for ἴδη in IV 63 (as in *Plat. Com.* 153. 5 καν μὲν πίπτησι τὰ λεύκ' ἔπανω it is natural to find a v.l. πίπτηγ), and θῶμι for θῶμαι in VIII 9; possibly in VII 113, where Mr. Nairn gives φέρε' ὁδε τὸν ποδίσκον: εἰ σίνος, θῶ μι 'Let me put it on, to see if there is any fault'—in 'it,' I suppose, *i.e.* the shoe. But μιν should refer to ποδίσκον, and σίνος is an 'injury,' a 'hurt.' Blass' reading εἰς ἵχνος, 'let me put it into a shoe' or 'on a sole,' is not mentioned.

II 60 ἐγὼ δ' ὅκως ἀν μὴ μακρηγορῶν ὑμέας, ὄνδρες δικασταί, τῇ παροιμῃ τρυχω, τῇ παροιμῃ. The ordinary meaning "pro-

verb" is fitting enough. Herodas wishes to bring out the ignorance of Battaros, who takes μακρηγορῶντα τρύχειν to be a proverb, but does not take μιν ἐν πίστῃ as one. This is one of the places where readers would probably have welcomed the assistance of a translation.

87 ἦν δ' οἶον ἐς τὰ δοῦλα σώματα σπειδή... μοῦνον ἡ τιμὴ ἐν τῷ μέσῳ ἔστω. Mr. Nairn adopts Buecheler's perverse reading οἶον, 'Si ut in servilia corpora ruit,' meaning what? It should be οἶον 'solely'; and the meaning, which has not been explained correctly, is: 'If, however, he is set solely upon the test by examination of slaves under the rack, as an alternative to evidence in court': see J. W. Headlam in *C.R.* vii. p. 1, viii. p. 136.—'The τιμὴ is probably intended here to cover any loss caused to the master by torture of the slave.—Undoubtedly: as may be seen from *Ar. Ran.* 623 and *schol.*, *Dem.* 978. 8 and the *πρόκλησις* in 1387.

W. HEADLAM.

WALTZING'S *MINUCIUS FELIX*.

M. Minucii Felicis Octavius in usum lectionum suarum edit J. P. Waltzing. Pp. 290. Louvain: Peeters, 1903. Fr. 7.50; the translation, fr. 2.50.

To critical students of the text of the *Octavius* this cannot fail to be an acceptable book. The edition of Halm, which, with Firmicus *de errore profunarum religionum* forms the second volume of the Vienna *Corpus Scriptorum Ecclesiasticorum Latinorum* appeared in 1867. It was executed with the judicious tact of all Halm's critical work; only those emendations are adopted in the text or quoted in the *app. crit.* which approach verisimilitude. Yet even then the list of writers who had contributed to the explanation or emendation of the *Octavius* was in strange disproportion to the actual bulk of the work; and since then these have been reinforced by a new series of critics trained in the various artifices of modern palaeography. It is to this palaeographical class of students that Prof. Waltzing's new edition particularly appeals; a whole host of German scholars, besides Dutch, Belgian, French, Swiss, Italian, Spanish, Russian, and English names, have discussed from every side the chief problems

which the treatise raises, especially the relation of Minucius (1) to Tertullian's *Apologeticus* and *Libri ad Nationes*, (2) to Cyprian's *de idolorum vanitate*, and the question, did Minucius reproduce Tertullian or Tertullian Minucius? or did they both draw from a common source?

It is the great and peculiar merit of Waltzing to have presented in the edition before us something like a complete sketch of the controversy on these points: a task of no slight labour or difficulty. English readers, who only know the edition of H. A. Holden, which is mainly valuable on the exegetical side, will be surprised to learn how extensive a literature on the *Octavius* has grown up within the last forty years. Of this, as well as of the various articles written before 1867,—in all amounting to 187 distinct works or dissertations, Waltzing has given a complete catalogue; the names amount to 155. On the priority of Minucius or Tertullian, he expresses himself in favour of the former. But his whole analysis of the question, as presented mainly by the Germans, will be read with interest; and perhaps most readers will be inclined to side with his view.

An account of the unique MS. on which the text is based will be found on p. 9. It is of the ninth century, No. 1661 in the National Library of Paris. A facsimile of a portion of it is given on p. 76. Sabaeus, who was the first to copy and edit it in Rome 1543, has been thought to have found it in the Vatican Library of which he was librarian; but it is now believed that he discovered it in Switzerland or Germany. It is written in Carolinian minuscule, but with the words only rarely separated from each other. It is preceded by Arnobius *aduersus nationes* and in the MS. is headed as the eighth book of that work, a fact which accounts for the lateness of its discovery as an independent treatise. The Brussels Library possesses what seems to be a copy of this made in the fifteenth century, No. 6851: about this we should be glad to have more particulars: the writing, of which there is a facsimile on p. 147 cannot be as late as century XVI.

Waltzing's constitution of the text seems on the whole very judicious. While acknowledging his obligations to Halm, he often deviates from him, and is, on the whole, more conservative and less inclined to adopt merely possible emendations. Of the *Octavius* it is particularly true that a correct text is the work of centuries, and that some of the best corrections have been made by obscure individuals and published in journals where they might easily have remained unnoticed. It was one of Halm's great merits to record these in his preface; and his work has been continued by Waltzing. I confess, however, that many of the corrections made since Halm's edition of 1867 and now recorded by Waltzing seem to me of a very hazardous and tentative kind, especially those of Bährrens and Cornelissen, whose names perhaps figure rather more prominently in this edition than the intrinsic merits of their suggestions can claim. Many of them are ingenious: very few convincing. Judging from the extracts, I should suppose Svoboda to be one of the more sane critics who have written on the *Octavius* of late years; but his actual writings I have not seen. Klussmann, whose criticisms on Fronto are excellent and widely known, has also written on Minucius, and many of his remarks are, as might be expected, weighty and considerable. *Sed de his alii alia iudicabant*: meanwhile no reader of early Christian literature, no scholar who cares to study the critical history of a text preserved in only one MS., and that MS. often depraved, but will acknowledge with

gratitude the service which Prof. Waltzing has rendered by his new *app. crit.* and will trace in this ed. of the *Octavius* a remarkably interesting type of what has happened in other more distinctly classical works, notably in Velleius Paterculus, whose text depends on the single now lost Murbach MS. and is far more desperately corrupted than that of the *Octavius*.

I have mentioned only a part of M. Waltzing's volume. It includes however much besides; the Latin inscriptions of M. Caecilius Natalis found at Cirta; the citations from the *Octavius* which occur in Lactantius, Jerome, and Eucherius; the Analysis Logica of the dialogue drawn up by Lindner (ed.² 1773), Cyprian's treatise *de idolorum vanitate*; the *Passio Sanctorum Scilitanorum*, or acts of the martyrdom of certain Christians of Scili in Numidia, July 17, A.D. 180; 52 pages of parallel passages from Greek and Roman writers which illustrate Minucius and must have been known and used by him, particularly Cicero *de n. deorum* and *de divinatione*, and Seneca. The resemblances are in many cases striking, and quite justify the boast of St. Jerome that Minucius in his *Octavius* had drawn from the whole body of gentile literature, a remark to which the words of Minucius at the end of the dialogue form a good parallel (39 fin.) *et argumentis et exemplis et lectionum auctoritatibus adornasset*. On the other hand the express references to the Bible are rare; the work shows learning and erudition rather than scriptural knowledge; or at least its author is sufficiently aware of his apologetic character not to parade his Christianity offensively.

The passage of Tacitus describing the persecution of the Christians under Nero (*Ann.* xv. 44) and the letter of Pliny with Trajan's rescript (Waltzing, pp. 207-220) are followed by a table of proper names and some of the Latin words which seem to call for particular explanation. I have found this very useful.

The chief defect in this otherwise complete edition is one which its plan makes almost inevitable: it has no exegetical commentary. It is true that the *app. crit.* often introduces exegesis by way of explaining why particular readings are preferred; but this is only incidental. The want of a commentary is however to a great extent supplied by the French translation of the dialogue which Prof. Waltzing has published simultaneously in a separate volume of 48 octavo pages (Louvain: Peeters, 1903).

In re-perusing the *Octavius* I think it

worth while to make one remark which has struck me more and more. The so-called *Ciceronianism* which many editors find in it has been unduly exaggerated: it is only true superficially and in a limited sense. Compared with the *de natura deorum* or the *de divinatione* it is intricate, obscure, and even difficult. Probably this traditionally *Ciceronian* style of the *Octavius* may have been caused by its superiority to the curious and involved Latin of Tertullian, in comparison with which it is no doubt limp and easy. But even now that three centuries and a half have cleared it from many of its obscurities, it cannot be said to attain to

anything like the lucidity of Cicero. Any one who wishes to test this may do so by reading a single page; he will halt more than once, I had almost said, again and again. And this is not the fault of the MS., which is a very good one, though hardly rising to the excellence of the single MS. of Orientius which we now possess, and which within the last year has been so carefully re-edited by the poet's compatriot, M. Bellanger: it is inherent in the style which partly, indeed mainly, classical, bears notwithstanding no slight admixture of a quite different and much later epoch.

ROBINSON ELLIS.

SANDYS' HISTORY OF CLASSICAL SCHOLARSHIP.

A History of Classical Scholarship from the Sixth Century B.C. to the End of the Middle Ages. By JOHN E. SANDYS, Litt.D. Cambridge Univ. Press. Large crown 8vo. Pp. xxiii + 672. Cambridge, 1903. 10s. 6d. net.

THE complete history of any long-continued phase of intellectual activity is rarely written, until it has either run its course or has ceased to occupy a conspicuous or, at all events, a commanding position in the cultural movements of an age. This may possibly serve as a partial explanation for the otherwise strange circumstance, that we have had to wait until now for a comprehensive survey of classical scholarship; for we cannot close our eyes to the deplorable fact that the Humanities are at the present day virtually on the defensive and in many quarters in imminent danger of being relegated to the background as a superfluous literary luxury, merely calculated to retard the rapid acquisition of a materialistic education which our strenuously scientific age now demands. But while in this struggle for existence the survival of the fittest may be confidently predicted, the present might, indeed, seem an opportune time for a retrospect of the labours that during more than two milleniums have been spent upon the matchless literature of Greece and Rome. This task, as grateful as it is herculean, has fallen to the lot of Dr. Sandys, who needs no introduction to classical scholars.

The first of two volumes now before us comprises the period from the sixth century

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B.C. to the beginning of the Renaissance within the extremely modest compass of 650 pages. To review a work of this nature in a way to do anything like adequate justice to it is manifestly impossible within the limits to which I am necessarily confined, so teeming is it with detailed and varied information on an astounding multiplicity of most interesting topics, so difficult is it to convey to one who may not himself have had occasion to traverse the extensive area here covered a vivid conception of the immense labour and the constant exercise of a discriminating judgment involved in the finished product. But as the learned author, by rising to the level of his stupendous undertaking, has produced a work which no student of the classics can neglect with impunity, the reviewer is, at least, happily relieved of the necessity of tabulating its varied contents with a view to whetting the reader's appetite for its perusal. It will suffice for our purpose to enumerate the principal headings of the six books into which the volume is divided and to discuss, as briefly as possible, such items as, in the judgment of the present critic, call for special comment.

After a preliminary chapter on the meaning and use of such terms as *scholar*, *philology*, *φιλόλογος*, *γραμματικός*, and *κριτικός* (pp. 1-13), bk. I. deals with *The Athenian Age* (c. 600-300 B.C.) in seven chapters (pp. 17-102); bk. II. takes up *The Alexandrian Age* (c. 300-1 B.C.) in two chapters (pp. 103-164); bk. III. is devoted to *The Roman Age of Latin Scholarship* (c. 168 B.C. - c. 530 A.D.) in four chapters (pp. 165-260);

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bk. IV. to *The Roman Age of Greek Scholarship* (c. 1 B.C.-530 A.D.) in eight chapters (pp. 261-375); bk. V. discusses *The Byzantine Age* (c. 530 - c. 1350) in two chapters (pp. 376-428); bk. VI. finally, which comprises almost one-third of the entire volume (pp. 429-650), treats of *The Middle Ages in the West* (c. 530 - c. 1350) in nine chapters. Interesting paleographical facsimiles, portraits, and allegorical illustrations, which are all learnedly elucidated, a selected list of the principal sources consulted (other bibliographical references are given in profusion in foot-notes) are some of the external features of the book. But by far the most useful of these adjuncts is furnished by no fewer than twelve *chronological tables*, 'doctis, Iuppiter, et laboriosis.' They give a complete and accurate *conspicuum* of the literary and philological activity of Europe for nearly 2,000 years. They contain in all about 900 names, with dates and a mass of sundry but valuable information regarding the foundation of famous monasteries, schools, and universities. Particularly welcome are the three last tables, covering the period from 600-1400, for the names and dates here conveniently classified are comparatively little known and, so far as I am aware, no similarly comprehensive *conspicuum* has hitherto been accessible, the data having to be laboriously compiled from a variety of sources. Dr. Sandys aptly compares these 'Chronica' to the *liber Annalis* of Atticus, of which Cicero admiringly said, 'ut explicatis ordinibus temporum uno in *conspicu* omnia viderem,' but the author's modesty doubtless forbade him to add, that they will also be found far more trustworthy than Cicero's chronological *vademecum* can be shown to have been, confined though it was within considerably narrower limits.

Bk. I. *The Athenian Age*: In the treatment of this period, Dr. Sandys has endeavoured to combine the eidographic and chronological methods, dealing with such subjects as the study of epic, lyric, and dramatic poetry, the development of prose style and rhetoric. Such a topical arrangement is not without its advantages, but they are neutralized by the fact that it is not carried far enough. Thus the survey of Homeric criticism is of little value, when, as here, it is restricted to the Athenian age. Again, this method of treatment necessitates some awkward repetitions, the 'philological' work of Plato and Aristotle in particular, having to be taken up at various points, which prevents the student from getting a

comprehensive view of the contributions of these men in the domain of classical scholarship. The account of the lyrical poets (pp. 43 ff.) seems to me somewhat irrelevant, for it is apparently inserted solely for the purpose of pointing out to what extent they exerted an influence upon or were cited by later writers, notably Plato and Aristotle. This information would have been more appropriately given under these names, but the author was prevented from doing so by the method which he follows in this first book.

Dr. Sandys seems to me to do scant justice to *Protagoras*, whose work is briefly referred to on pp. 27 and 78. We may readily grant that, if measured by absolute standards, it possesses few, if any intrinsic merits, but when we remember that, so far as we know, he was the first human being who became scientifically conscious of grammatical moods and gender and recall how long it was before any genuine progress was made in the field of Greek Grammar, the pioneer-work of this highly talented man, is, historically considered, an epoch-making achievement which well merits the plaudits of posterity. The profound sensation which his discoveries created is still reflected in the ridicule of Aristophanes who, as so often, is merely the mouthpiece of conservative public opinion.—Nearly two pages are devoted to the great comic poet, one, in brevier type, giving a synopsis of the *Frogs*. This is, as it should be; for this immortal play is the very cornerstone, in any case, the earliest extant specimen of literary criticism, and yet, in a history of classical scholarship, I cannot but think that the long list of plays, either directly cited or alluded to, according to the scholiasts, together with the number of lines parodied by him, ought to have been given, in order to convey a more vivid idea, not only of the extent of his reading, but of the keenness and the minuteness of his criticism, prejudiced and unfair though it undoubtedly often was.

Four pages in smaller type are given to a synopsis and discussion of Plato's *Cratylus*. I do not object to the space accorded to this exceedingly interesting and important dialogue, but on the basis of comparative and intrinsic values the little more than two pages reserved for the *Poetics* seems a very meagre allowance. Regarding the Cratylean etymologies themselves, I regret to see Dr. Sandys still clinging to a view which, since the time of Schleiermacher has, indeed, been advocated by many illustrious

scholars. It is argued that, since the Platonic etymologies are, with but few exceptions, nothing short of ludicrous, they must be regarded in the light of caricatures or persiflage, as a sort of *reductio ad absurdum* of the etymological vagaries of his unscientific contemporaries. But this contention, I have always been convinced, is wholly unwarranted. It proceeds on the assumption that 'the king can do no wrong,' and it utterly ignores the well-known fact that etymology has only in very recent days been put upon anything like a scientific basis. It is psychologically improbable that Plato who, with the intuition of genius, discerned, as it were, in the distance, and in a few instances actually anticipated some truths regarding the origin and growth of language, universally accepted to-day, that Plato, I say, would have consciously invented such grotesque etymologies, had he been in possession of more accurate information. If they were all concocted in a spirit of Aristophanic batinage, then it is certainly passing strange that two milleniums were allowed to elapse before their satirical humour was discovered. No! Plato was as serious as ever Varro was in his *de lingua Latina*. Etymology exercised a strange fascination upon the ancient mind, poets, historians, and philosophers being as irresistibly attracted to it, as the moth to the light, and with equally disastrous results. The etymological monstrosities of a Plato and a Varro are, moreover, hardly worse than some of those perpetrated by G. Hermann or Hemsterhusius who had less excuse for them and whom no one would ever accuse of having indulged in playful fancy. Nay, some of the etymologies which find their way into print to-day still have a decidedly Cratylean flavour. We can, therefore, ill afford to smile at Plato for his etymological failure, but at the same time let us cease placing him on a pedestal to which he has no justifiable claim.

Aristotle, as already remarked, unfortunately does not receive a separate treatment, but his Homeric studies, his *Didascaliae*, his contributions to Rhetoric and Dramatic Criticism are discussed under these various headings, while a chapter is devoted to Plato's and Aristotle's criticism of Poetry in general. A synopsis of the *Poetics* is, of course, not lacking, and it is duly extolled as a masterpiece which was not to be rivalled till the appearance of the $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$, to which exactly double the space accorded to the *Poetics* is assigned

(pp. 282-286). I yield to no one in my admiration for the immortal rhetorical essay of the *Anonymus*, but if we consider the brilliant inductions, the analytic acumen, the depth and breadth and catholicity of observation, and above all the marvellous influence upon dramatic literature and aesthetical canons of the brief and fragmentary Aristotelian treatise, the value of the $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$ sinks into utter insignificance.

Aristotle's $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$ Dr. Sandys thinks may have contained materials for his *Poetics* (p. 75), upon which he would thus have built his theoretical superstructure, as the *Πολιτεία* e.g. constituted the basis of the *Politics*. But the $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$, as can still be demonstrated, was one of the popular dialogues which discussed for a reading public the same or similar topics dealt with in the esoteric treatise which was never intended for publication and, indeed, there is *not a trace in extant sources* that the *Poetics* were ever consulted. The sporadic references in Themistius, in Diogenes Laertius, and certain parallelisms in Plutarch and even in Horace's *Ars Poetica*, whether directly or through the medium of Neoptolemos of Parion, were, if Aristotelian, ultimately derived from the $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$. If Dr. Sandys' surmise (p. 63) that Aristotle must have mentioned Thespis as introducing the prologue and the *þóras*, 'either in the fuller form of the *Poetics* or in some other work,' be correct, which I am disposed to doubt, we should not hesitate to ascribe these statements also to the 'other work,' i.e. the $\pi\epsilon\rho\iota\tilde{\nu}\psi\circ\sigma$, nor can I see any warrant for the assertion (p. 64), that Aristotle clearly preferred the poets of the Middle Comedy to those of the Old, because he labels Aristophanes a 'lumpooner.' He certainly merits this epithet, but that Aristotle at the same time saw in him, as we do, a great deal more, is evidenced by the significant fact that, well acquainted though he was with the entire comic drama, he yet selected the 'lumpooner' as its foremost and typical representative, just as he selects Homer for the Epos and Sophocles for Tragedy (Cp. *Post.* ch. 3). Moreover, in view of such plays as the *Odyssees* of Cratinus and the *AIolosicon* and *Plutus* of Aristophanes himself, to which even ancient critics assigned the $\tau\jmath\sigma\mu\epsilon\sigma\gamma\kappa\omega\mu\delta\iota\alpha\tau\pi\sigma$, it is extremely doubtful, whether he would have been able to recognize the subtle and artificial differentiation between the Old and Middle Comedy, which latter is a purely

transitional phase at the best, the distinction in question having been made possible only by the rise of the New Comedy which Aristotle did not live to see.—It may be remarked in passing that Dr. Sandys at the close of this first book, inserts an almost full-page illustration of the Spada Palace statue, without a word of comment. But this statue, as long known, has nothing whatever to do with Aristotle, for not only did the present head not belong to it originally, but the basic inscription (ARISTI) itself proves that it was never intended to represent the Stagirite, but probably *Aristippus* (See Visconti, *Iconogr. Grecque*, Matz-Duhn, *Antike Bildwerke in Rom* I. No. 1174, Studniczka, *Röm. Mitth.* v. p. 12, Helbig, *Führer*, ad. loc.).

Bk. II. While the Athenian Age takes up about eighty pages, the treatment of the *Alexandrian* is comprised within but *sixty*. This, it would seem, is out of all proportion to the actual achievements of both periods, so far as classical scholarship is concerned. In the earlier, indeed, philological research as a profession or pursued as an end in itself can hardly be said to have existed, whereas in Alexandria it was developed to the highest point which it was destined to reach in antiquity. No new discovery marking progress, with the possible exception of Greek Syntax in the hands of Apollonius and Herodianus, is met with in later Graeco-Roman days. With the Alexandrian methods of textual and literary criticism all future scholars, including the Roman, rested satisfied. In the field of exegesis also, they left nothing for subsequent commentators to do but to compile, to condense and, in general, to feast upon the richly laden banquet provided for them. It is true, we possess not a single work of these Alexandrian savants, but from their 'disiecta membra' we can still acquire a perfectly adequate conception of their methods, the scope of their studies and, at least, the titles of most of their writings have been rescued from oblivion. With one exception, to be mentioned later, Dr. Sandys has, indeed, omitted nothing of salient importance. The story of the Library and the Museum, the names, data, and works, with an occasional brief estimate of the labours of the most noted scholars of this age, are all given with the requisite bibliographical references and the entire treatment is marked by that scholarly accuracy which distinguishes the work as a whole. And yet, I doubt, if any student, not already thoroughly conversant with the subject,

will rise from the perusal of these chapters with any other impression than that these 'dusty Alexandrians, pent up for ever between sea and sand-hills, drinking the tank water and never hearing the sound of a running stream,' as Charles Kingsley characterized them, were after all nothing but *γονιοβόμβυκες*, mere 'doctores umbratici.' This unjust conception is primarily due to the fact that the author, in his otherwise laudable striving for utmost conciseness and rigid objectivity, has neglected to give, either in an introduction or in retrospect, the requisite cultural background or perspective, which might have enabled the student to see more clearly the peculiar causes and conditions which made Alexandrian literature and scholarship what it is. The critical estimate of the Byzantine period, based on Krumbacher, Wilmowitz, and Frederic Harrison (see p. 417, 424 ff.) may show how adequately, though briefly, this might have been done. The evolution of the cultured man of leisure into the professional scholar, the shifting of the intellectual focus from democratic Athens to monarchical Alexandria, the fact that, with Menander, Greek genius had virtually ceased to be spontaneously creative and original, nearly all the forms of literary expression having been developed to their artistic culmination—these are some of the salient considerations which will help us better to understand and appreciate Alexandrian achievement. These scholars simply fulfilled the mission to which they were historically assigned. They took an inventory of their priceless literary inheritance and bequeathed it to posterity. The poets, having no longer a nation for an audience in the strict meaning of that word, and with no great objects to kindle their imagination, were compelled to appeal to a highly cultured, but small reading public. Artificiality of expression, erudition, and formal elaboration thus naturally took the place of the simplicity, spontaneity, and inspiration which distinguished the Golden Age of Greek Literature, and which was recognized as irrecoverably past. But true as this is, our knowledge of Alexandrian literature is after all too fragmentary to warrant the somewhat sweeping, though traditional condemnation found on p. 115. In any case, Theocritus must be exempted, who, typical Alexandrian though he was in many respects, is admittedly one of the world's immortal poets. Yet he is referred to but briefly and 'kühl bis ans Herz hinan,' the author having nothing further to say of his matchless Idyls than

that they must have charmed these urban Alexandrians by their pictures of rural life. Strictly speaking, the whole paragraph on Alexandrian Literature is somewhat irrelevant, for we learn nothing of the studies which poets, like Apollonius, Callimachus, Lycophron, and Theocritus, devoted to their predecessors, for it is only on this score that they can have any just claim upon our attention in a history of classical learning. Still, perhaps not too much stress should be laid upon the above desiderata in a first attempt at a complete survey of the entire subject, the author being only too naturally drawn to inspection rather than to introspection, to synthesis rather than to analysis, and I doubt not that in a second edition Dr. Sandys, relieved of the initial task of collecting, sifting, and arranging the vast concrete material, will not fail to add at proper intervals in his book illuminating comments, such as I have indicated, so that the student may more readily recognize definite and characteristic landmarks in the development of classical learning.

In matters of details, I note the following: The sceptical attitude assumed toward the *librarianship* of *Callimachus* seems to me unwarranted. It is, to say the least, as authentically attested, as that of Zenodotus, Eratosthenes, or Aristarchus. The pinacographic labours of *Callimachus*, as Dr. Sandys himself admits, would alone render such an assumption intrinsically plausible, and it would be still further strengthened, if Th. Birt's ingenious hypothesis (*Das antike Buchwesen*, pp. 436 ff.) be correct, as it may well be, that the famous saying of *Callimachus*, *μέγα βιβλίον, μέγα κακόν* (to cite it in its current, shortened form) was not a satirical allusion to the long-winded epic of *Apollonius*, but referred rather to an innovation of *Callimachus*, by which the hitherto prevalent but cumbersome 'Grossrollensystem' was discarded for the more practicable 'Kleinrollen,' a change which would in a measure correspond to that from the ponderous folio to the lighter octavo in more modern times. But the author, in company with some scholars of repute, lays stress upon chronological difficulties which are alleged to militate against the *librarianship* of *Callimachus*. These objections do not, however, in my judgment, possess any genuine validity. The traditional data of the lives of Zenodotus and *Callimachus*, as well as the birth of Eratosthenes, are admittedly mere approximations, and even if Zenodotus did die not far from 234, nearly 90 years old, there is not the slightest reason

for supposing that he held the onerous position of librarian for more than 50 years, even granting that he received the appointment as late as the accession to the throne of his pupil, Ptolemaeus Philadelphus, in 285 B.C. He may, for aught we know to the contrary, have retired at the age of sixty or even earlier, being succeeded by his pupil *Callimachus*, who would then have been not more than fifty, probably somewhat younger. After an incumbency of this office of about 25 years, he was in turn succeeded by Eratosthenes who, according to the generally accepted chronology, was called to Alexandria just about the time of *Callimachus*'s death (c. 235 B.C.). The elasticity of our available data, therefore, our complete ignorance, in particular, of the length of time Zenodotus held the librarianship, the positive and unimpeachable statement that *Callimachus* was appointed to the same position, the strong collateral evidence, finally, pointing in the same direction—all these considerations ought to be sufficient to warrant the acceptance of the *librarian* *Callimachus* without any philological compunctions of conscience.

On p. 118 we are told that Aristarchus had criticized Philetas in a special *ὑπόμνημα*, entitled *πρὸς Φιλητᾶν*. But this is clearly an error, shared by many others. It was, I am convinced, nothing more than a kind of supplement to the *Ἄτακτα* of Philetas, the first Greek Dictionary known to us and which seems to have enjoyed a wide celebrity, being probably still extant in the time of Athenaeus, who quotes from them a dozen times. See esp. ix. 383 c. In like manner Aristophanes composed a book *πρὸς τὸν Καλλιμάχον πίνακες*, i.e. additions to the great Catalogue, and *Callimachus* himself wrote *πρὸς Παξιφάνην*, his teacher, which was, therefore, presumably not of a censorious nature, but, like the *πρὸς Κωμανόν* of Aristarchus, merely designated the recipient by way of dedication. If the treatise *πρὸς Φιλητᾶν* had been of a polemical character, we should have expected *κατά* (contra) rather than *πρὸς* (ad), this preposition being used *hostili sensu* only if it does not refer to a proper name. Cp. e.g. Aesch. *κατὰ Κτησιφῶνος*, Josephus *κατὰ Ἀπίωνος*, Hippolytos *κατὰ πασῶν αἰρέσεων*, Proclus *κατὰ Χριστιανῶν*, by the side of Aristarchus *πρὸς τὸ Σένωνος παράδοξον*, Sext. Emp. *πρὸς μαθητικούς*, Origen *πρὸς . . . Κέλσον* *ἀληθῆ λόγον* etc.

There is a wide-spread belief, though the 'canons of best authors,' compiled at

Pergamum and Alexandria, in a measure disprove it (see p. 156), that, with the possible exception of Plato and Aristotle, the philosophical labours of Alexandrians were virtually confined to poetry, while their Pergamene rivals devoted themselves with almost equal one-sidedness to prose, and it is this belief that has had not a little to do with the general acceptance of the view that the Canon of the Ten Orators originated in the school of Crates. Under these circumstances an otherwise insignificant bit of evidence, preserved among papyrus scraps, brought to light by Grenfell and Hunt, but unfortunately overlooked by Dr. Sandys, at once assumes a singular importance. It is this: *'Αποτάρχου [eis το] Ἡροδότον αἰνόνυμα* (Amherst Papyri II <1901> No. 12). Not only have we here the first proof that Aristarchus occupied himself with the 'father of history,' but we are also justified in inferring that the alleged neglect of the prose master-pieces of Greek literature is probably an unwarranted assumption, not unnaturally caused by the almost complete silence of our sources regarding this phase of Alexandrian research, although we shall not be far wrong in supposing that, if their activity in this field had not been incomparably inferior in bulk and quality to their consummate achievements in the criticism and exegesis of poetry, we should have known a little more about it than we admittedly do. In the brief note (p. 136) on the calculation of the *άκμή*, that peculiar chronological panacea of Eratosthenes and his disciple Apollodorus, I miss a reference to the brilliant and fundamental article on

the subject by Diels (*Rhein. Mus.* 31 pp. 1 ff.) to whom we owe the rediscovery of this ancient method and the knowledge of its influence. P. 155: The statement in Strabo that, according to Crates, Menelaus had sailed from Gadeira to India, probably suggested, as may be remarked in passing, the same idea to Columbus, as I have endeavoured to show in the *Johns Hopkins Univ. Circulars*, Dec. 1902.

Excepting a few minor details, such as the non-Homeric contributions of Aristarchus, the only serious omission in the account of Alexandrian scholarship seems to me the failure even to mention *Demetrius Magne*, a contemporary of Cicero. One need but glance at the long but certainly far from exhaustive list of homonyms, such as the Apollonii, Apollodori, Demetrii, Dionysii, etc., in Wissowa's *Lexicon*, to feel that the very idea of Demetrius' works, entitled *Η εριτ συνωνύμων πόλεων* and *Η εριτ ρων συνωνύμων ποιητῶν καὶ συγγραφέων*, was in the nature of an inspiration. Such treatises must have filled a long-felt want, as is, indeed, evidenced by the extensive use made of them in many later writers, and the chapter on Deinarchus, fortunately preserved to us by Dionysius, also shows what circumspection, learning, and scholarly accuracy Demetrius applied to his grateful but difficult task. The loss of the second work, in particular, is most deplorable, so that its author eminently deserved, at least, a passing mention in a complete survey of classical scholarship.

ALFRED GUDEMAN.

(*To be continued.*)

BRIEFER NOTICES.

A Greek Grammar: Accidence. By GUSTAVE SIMONSON, M.A., M.D., author of *A Plain Examination of Socialism*. Swan Sonnenchein. xiii + 351 pp. 6s. 6d.

THIS Grammar has many good points. It is written with a considerable knowledge of modern discovery, and avoids most of the old mistakes in matters of form. Thus the facts about *σσ* : *ττ* are correctly stated (p. 6); evidence is given for the pronunciation of internal aspirate in certain compounds (12); the sounds of the symbols are carefully stated, and (a useful addition) the Latin transliterations of some are given (p. 11);

the verb-forms have been carefully sifted, and such tables as the Synopsis on p. 125 or 126, with its classified stems, are excellent; the sections on the formation of words and the classification of compounds, at the end, are clear and compendious; the print is good. On the other hand, in a book of so much detail, we should have expected more. The author has not studied the history of the alphabet, or he would not write that *Sampi* is 'evidently a combination of *Σ* (= *σάν*, i.e. *σύμα*) and *πῖ*': it is of course the old sibilant *M*. Both *F* and *Q* are found in inscriptions, as should have been stated. On the

whole, the inscriptions have been insufficiently studied, and in one paragraph about them (p. 111) Π with short limb is printed with an ordinary *gamma* Γ. More should be said of the dialects in a book of this compass, and they should be discussed separately; Prof. Ridgeway's attractive theory, of the points in common between Old Attic and Aeolic, might have been mentioned. A few further points may be indicated. 'τ, for which Attic often has σ,' is not accurate (p. 2); Attic οι=τι. The supposition that the modern Greek newspaper jargon is a 'process of purification' (p. 8) is a ludicrous travesty of the truth. The proper phonetic distinction of breathed, voiced, and aspirate, should be substituted for 'smooth, hard, and rough' (p. 13): the last seems to be an unfortunate choice. In 31. 2 the distinction between ἔγγονος (= ἵν-) and ἔγγονος (= ἔκ-), which are both found, should have been stated; the former alone must have had the nasal sound, the latter being *eggono*s. The order of the mutes (p. 14) should be made to correspond to their place, moving forward from the throat: gutturals, dentals, and labials. Under *crasis*, space might be found for μοίστι, σοίστι, and θοίματον. οϊ final accented does not take -κ before a vowel in prose (p. 25). The modifications of final sounds in external combination might have been illustrated from inscriptions: τῆμ πόλων, Cretan πατρὸς δέ, etc. 'Internal' should be inserted in § 135. 1 before 'position'; the statement is not true of a short final in position.

W. H. D. R.

Lectures on Classical Subjects. By W. R. HARDIE, M.A. Macmillan & Co. 1903. Pp. x, 348. 7s. net.

THESE lectures the author remarks, are not addressed to the professional scholar, who 'will not find much, if anything, that is new to him in this volume.' The first five pass in review some of the more important passages in the ancient authors which illustrate their feeling for Nature, their beliefs about immortality and the supernatural, the legend of an Age of Gold, and the Vein of Romance in Greek and Roman Literature. Two deal with the language and the metrical form of poetry. The last three are on Literary Criticism at Rome, the Revival and Progress of Classical Studies in Europe, and Aims and Methods of Classical Study.

Professor Hardie has the skilful lecturer's eye for the interesting aspect of his subject, and he is not afraid of a generalisation. It would be easy to pick out statements which in a treatise would need qualification. But that is not the point. At a time when Classical Studies are attacked as useless, it is well that books of this kind should be written for the general reader who remembers a little of his Greek, and understands the meaning of culture. The junior student, also, who has forced his way through the thorn-hedge of grammar, is sometimes glad to breathe an ampler air. The professional teacher will find, if not profound reflections, at least not a few suggestions that will interest him.

F. M. CORNFORD.

CORRESPONDENCE.

TEN COMMANDMENTS FOR CLASSICAL STUDENTS.

In a recently published book, Lehr's *Kleine Schriften* (p. 476), is given a set of ten commandments for philologists; this code, however, by the very nature of the educational situation in Germany, is hardly adequate for English and American students. We suggest the following:—

1. Thou shalt have no other gods before Syntax.
2. Thou shalt not set up unto thyself modern authorities: thou shalt bow thyself down before the original sources, and them only shalt thou serve.

3. Thou shalt not take the name of the latest German in vain; for the reviewers will not hold him guiltless that taketh the name of a German in vain.

4. Remember thine author: peradventure he is not spurious.

5. Honour prose composition, when thou teachest: that thy pupils may rejoice and thy pile of exercise books increase before thine eyes.

6. Thou shalt not murder thy native language.

7. Thou shalt read the journals.

8. Thou shalt pronounce proper names: moreover, thou shalt pronounce them fluently.

9. Thou shalt not bear false witness against the text of a poet by filling up the lacunae therein, until thou shalt have trans-

posed the verses and turned them end for end.

10. Thou shalt not covet thy neighbour's horse.

CORA M. PORTERFIELD.

MAYWOOD, ILLINOIS.

REPORT.

PROCEEDINGS OF THE OXFORD PHILOLOGICAL SOCIETY.—HILARY TERM, 1904.

On February 5th a paper was read by Mr. WARDE FOWLER in support and amplification of the view put forward in Heinze's *Virgil's Epische Technik* (Berlin, 1903) that Virgil meant the character of Aeneas to grow during the action of the poem. Aeneas is always *pious*, but his *pietas* is only realised at its highest point in the last six books, and only as the result of the descent into Hades, and especially of the 'Heldenschau' in the Sixth Book, which is thus the pivot on which the whole story turns, and the crisis of the hero's life. In the first five books he shows manifest signs of weakness, e.g. in i. 92 foll., and even of *violenta* in ii. 314 foll., 594 foll., of forgetfulness of his divine mission in Bk. IV., where there is an undoubted reference to the narrow escape of the Empire from destruction at the hands of Antony and Cleopatra. In the Fifth Book the character improves, becoming more typically Roman; but even up to the latter part of Bk. VI. Aeneas is continually looking backwards instead of forwards—not yet fully realising that nothing that he has yet achieved is the real work of his life. In the last six books he never looks back or hesitates; and though the characterisation is not strong, and the real interest lies elsewhere, the poet meant his hero in these books to reach the heroic type of the Aeneas of the *Iliad*, in combination with the Roman qualities of *pietas* and *humanitas*.

On February 12th a paper was read by Professor COOK WILSON on the Problem of the Greek Modes. Through the accident of being asked by Professor Bywater to consider a passage in Aristotle's *Politics* (1276. a. 35) for another purpose, the writer had come across a piece of evidence which seemed inconsistent with any current theory of the Greek Modes. By some strange mischance this passage, as well as another—important but much less explicit—from Theon of Smyrna (Hiller, p. 48, l. 12), seemed to have been quite overlooked in the controversy, and it contained information of a kind supposed entirely wanting in the classical period about the internal constitution of a Mode.

It was contended that the passages usually quoted from Plato, Aristotle, Athenaeus, and Plutarch, while confirming Monro's view that a difference in pitch was essential to the difference between the Modes, proved that the Modes must also have differed in the arrangement of their intervals, i.e. as scales. The quotation in Athenaeus from Heraclides Ponticus was of special importance, and the exact drift of it seemed to be generally misunderstood. The result obtained from these passages was confirmed by the new evidence from Aristotle, which seemed to necessitate that the Modes differed as scales, and *inter alia*

could not be different species of the octave of the same compass. They must differ both in pitch and in interval, and thus somehow unite the characteristics of both keys and scales. Octaves taken at different positions in the same Perfect System would differ in this way; but such octaves as Westphal's would not do, because in an order of pitch contrary to the tradition about the Modes. That order had been supposed by Westphal to apply only to pure keys and not to the Modes at all; for it probably seemed that, if two systems were said to differ in pitch by a tone, &c., they must differ by this interval throughout and thus be different keys of the same scale, and hence the distinction would be inapplicable to octaves at different parts of the same Perfect System. It was suggested that this difficulty might be got over by supposing that the interval of pitch between two such octaves was measured by the interval between two notes in them occupying relatively the same given position in order in each of them; and similarly for a system of octaves.

It was shown that, if this was so, the traditional order of pitch given for the Modes, $11\frac{1}{2} 11\frac{1}{2}$, would be best accounted for by supposing that the fifth note from the bottom of the modal octave, the true paramese in the central and standard octave and the thetic in the rest, was the note measured from. This would lead to a system of modal octaves in the traditional relations of pitch, such that the Dorian coincided not with the $e-e$ octave, which has the intervals of the later so-called Dorian species of octave, but with the $f-f$ octave. This not only agreed with the statement in Plutarch that the tetrachord hypaton was excluded from the Dorian Mode, and with his record of the interval of the Mixolydian—the only notice of the kind in a reliable author—but was further confirmed by the fact that it gave a simple solution of a standing puzzle—the story in Plutarch of the treatment of the Mixolydian Mode by a certain Lampreces. Further, the system of Modes, when taken in connexion with an hypothesis based on Ptolemy about the manner in which the later modal names for the species of octave and for the keys arose, would also give a simple solution of another puzzle, which has occasioned much speculation, the ancient notation for the Hypolydian key; for this would be a necessary consequence of the position assigned to the Dorian Mode. The general relation of these Modes to one another seemed again to make fully clear the meaning of the criticism attributed to Heraclides Ponticus in Athenaeus.

The passage from Aristoxenus i. 37 was discussed. The transposition in it, proposed by Westphal, was defended by a curious circumstance in the text itself, which seemed to have been overlooked; on the other

hand it was shown that Westphal was wrong in supposing that this text, in another part, contained a contradiction.

On February 19th a paper was read by Dr. FARRELL on the Attic Thargelia, discussing (a) the vegetation-ritual, (b) the piacular ceremonies. The former part of the festival fell on the seventh day of Thargelion, that is, about the 20th of May, and was evidently an early harvest-thanksgiving or a consecration of first-fruits immediately preceding the harvest; it falls into line with other European peasant-ritual which has been minutely examined by Mannhardt, and which does not in itself imply any highly organised system of personal deities; it was certainly pre-Apolline at Athens, being taken over by the higher religion as much agrarian primitive religion has been taken over by Christianity. The chief interest and much perplexity attach to the second part of the festival, the piacular ceremonies, which took place on the preceding day; the question concerning the actual immolation of the pharmakos, of great importance for the history of Attic civilisation, was discussed in the light of the positive and negative evidence, and was shown to depend partly on the determination of the date of Socrates' death, which again requires a careful consideration of the Delian festival-calendar, and of the relation of various Delian festivals to the Attic Thargelia. The conclusion to be drawn from the varied evidence is that at least from the fifth century onwards there was no actual sacrifice of the human scape-goat at Athens, though human sacrifice was not unknown in the legend nor even in the ritual of Apollo. A further question was raised as to the exact significance of the religious figure known as the pharmakos; it was pointed out that the piacular conception of the scape-goat does not explain all the facts about him, and that we must also regard him in the light of a divine incarnation; the story for instance that he was put to death because he had stolen certain sacred vessels from Apollo's temple could naturally arise if the pharmakos was carried in procession bearing libation-cups in the character of a god; but if the pharmakos embodied a deity, it must have been an old vegetation-deity other than Apollo.

On February 25th Professor ROBINSON ELLIS read a paper on the following passages:—

Caesar *B.C.* iii. 69: Omniaque erant tumultus timoris fugae plena adeo ut cum Caesar signa fugientium manu prenderet et consistere juberet, alii dimissis equis eundem cursum configurarent, alii ex metu etiam signa dimitterent, neque quisquam omnino consisteret.

Configurarent seems to be an error for *confundarent*. A scene is described in which foot-soldiers and cavalry are in turbid retreat. Some of the horse-soldiers dismount and thus become indistinguishable from the rest of the retreating army.

Val. Flacc. iii. 670 :

En egomet quocumque vocas sequar: agmina ferro
†Plura metam.

In reconstituting 670 Langen is followed. The Vatican MS. gives *Et ego et quocumque voces qua tegmina ferro.* To Heinsius is due *En egomet*, to Jacobus *vocas sequar: agmina ferro.* For *Plura* Edd. have offered *Prina*, *Rupta*, *Dura*. Possibly the word was *Pulsa*.

Prop. iv. 8. 58 :

Territa vicinas Teia clamat faquas.

Possibly *amas*, water-buckets. Juv. xiv. 305: *Dispositis praedives amis vigilare cohortem Serorum noctu Licinus jubet.* The word occurs in this sense

in Pliny's Epistles. He combines it with *siphones* and other *instrumenta ad incendia compescenda* (x. 33. 2).

Prop. iii. 13. 32:

Aut unariam plumae †viricoloris avem.

So NF; this points to *viricoloris* rather than *versicoloris*; some bird whose feathers were green or tinged with green.

Sen. *Apocol.* viii.:

Quare, inquis, quaoero enim, sororem suam? 'Stulte, stude: Athenis dimidium licet, Alexandriae totum.' 'Quia Romae, inquis, mures molas lingunt.'

The American editor, Mr. Peazley Ball, explains *molas* as 'meal.' Is this meaning possible in the plural? The usual sense of the plural is 'mill-stones.' Seneca says incestuous connexions between brother and sister were not uncommon at Athens, recognised at Alexandria, only furtively permitted in Rome. This is thus expressed: 'You mean, because at Rome (i.e. if we look to our own country) the mice only lick the mill-stones where any flour has been left, not venturing on anything more open, e.g. where the flour lies freely on the floor, or has been collected in a bag or bin.'

Theogn. 894:

ώς δὴ κυψελίων Ζεὺς ὀλέσειε γένος.

κυψελίων is the reading of the best MS. A. Mr. Harrison prints *κυψελίδῶν*, and discusses the question what *κυψελίς* is meant in an appendix. Might not *κυψελίων* be a corruption of *Κύψελε σόν*? This is a merely palaeographical guess, and only offered as such.

Theogn. 898-902:

Κύρρ' εἰ πάντ' ἀνδρεσπι καταθητοῖς χαλεπαίνειν
γιγνάσκειν ὡς νοῦν οἷον ἔκαστος ἔχει
αὐτὸς ἐνι στήθεστι, καὶ ἔργατα τῶν τε δικαίων
τῶν τ' ἀδίκων, μέγα καν πῆμα βροτοίσιν ἔπην.

Professor Ellis would change *χαλεπαίνειν* to *χαλεπτ'* *ἔχειν* and *οἷον* to *χοῖον*. The con-contraction must thus be clear and the meaning not unintelligible. 1059, 1060 *Τιμαρόρα, πολλὰν ὄργην ἀπάτηρον* δρῶτι. *Γιγνάσκειν χαλεπόν*, *καίπερ ἐντινον* σοφό implies that the discernment of men's characters by distant observation, though difficult, is not impossible. In the four lines 898-902 the same thing is asserted, with the addition that, if such distant discernment of what others do or think were so hard as to be impossible, it would be a serious misfortune for the world.

Theogn. 1085, 6 he would write thus:

Δημῶνας, σὺ δὲ πολλὰ φέρειν βαρύς· οὐ γάρ ἐπίστη
τοῦθ' ἔρδειν δ τοι σοι μὴ καταθύμον γῆ.

Gives *Δημῶν αξιοι δε πολλὰ φέρειν βαρύ* (altered from *βαρύν*, according to Bergk³). The other MSS. point with equal clearness to *Δημῶνας*, *φέρειν*, and some inflexion of *βαρύς* in which either *s* or *v* is retained. Bergk conj. *σὺ δὲ πολλὰ φέρειν βαρύ*, which necessitates an unpleasing hiatus, but seems very likely to be right in *σὺ δέ*. Harrison gives *σοι πολλὰ φέρειν βαρύ*, objectionable as a repetition of *σοι*. If *σὺ δέ* is right, as seems more than probable, and *φέρειν*, as both A and the other MSS. agree, *βαρύς*, so far from being an awkward attempt to emend, will be necessary. And surely this personal sense 'resentful' is particularly idiomatic, whereas *βαρύς* would be commonplace, a fault of which Theognis is not often guilty.

Eunini *Ann.* i. 67, Vahlen:

Brakman *Frontoniana* p. 36 reports the Fronto palimpsest as having beyond doubt *Constitis fluvius*.

This must be (*Postquam*) *constitit is, fluvius*, a type of hexameter quite according with Ennius' prosody elsewhere.

Professor Ellis also suggested that the explanation of the abnormal *Regis opus, sterilisce diu palus aptaque remis* (Hor. *A. P.* 65) is to be found in some peculiarity of pronunciation in which the syllables were slurred. A trace of something of the kind seems to be found in the reading of the *Fronto patimpsest* p. 228 Naber *PLAUDIBUS* for *PALUDIBUS*, and in the Oxford MS. of Catullus (Canon. Lat. 30) *plaudesque* for *paludesque* (ex. 5). And so *plaudicolam* for *paludicolam* in the ninth century MS. at St. Gallen of an epigram in the *Anthologia Latina* 395. 6 Kiese.

At the same meeting Mr. POWELL read a paper on two passages of Virgil's *Georgics*.

i. 410 *Presso gutture*. The meaning of 'hushed, pressed, soft,' which all the editors give, seems inappropriate, both to the context and to the ornithological fact. A clear note of joy is described; and the evidence of observers shows that 'indrawn throat' does not express the action of a rook in cawing, although the neck may be strained forward. *Pressus* has a special meaning of 'distinct,' 'clear,' in the technical language of rhetoric. In Cicero *de Officiis* i. 133, *prese loquentium* means 'with a clear distinct enunciation.' In Cic. *de Orat.* iii. 43, *oris pressu* means 'distinct articulation,' and so in iii. 45. In Cic. *de Nat. Deor.* ii. 149 *sonos vocis distinctos et pressos* are made by the tongue. *Presso* then combines, in Virgil's usual way, the physical meaning of effort, of pressing forward, not drawing back, the neck, and this literary use; and the phrase may be translated 'with clear, deep note.' Virgil's exact knowledge of rooks may be illustrated by *Georg.* i. 382, *corvorum exercitus*, which refers not merely to their numbers, but to their military precision and discipline.

iv. 141 *Illi tiliae atque uberrima pinus*. The meaning of *uberrima* has been missed by the editors, who generally take it as meaning 'fruitful,' which makes good sense at first sight, as the Stone Pine (*pinus pinea*), the pine of Italy and the Tyrol, was much prized for its nuts in Pliny's time (*N. H.* xvi. 44), which are still eaten and called Pinocchi.

But the lines 139 to 141 refer to gardens from the point of view of bee-keepers; Columella, ix. 4, and Palladius, i. 37, give both the *tilia* and the *pinus* among the list of trees which a bee-keeper should plant; the trees in this list are all either of the class of early-flowering trees, or resiniferous. There is no need to accept the reading *tinus*, which Philargyrius apud Servium ad loc. says was left by Virgil in his own handwriting as a variant, although *tinus* is an early-flowering shrub. *Uberrima* means 'rich in pollen.' Conifers are rich in pollen, and an observer writing in the *Spectator* of March 10, 1894, speaks of the pines attracting the early bees, and of the pines being crowded by working bees in the warm early spring of 1893 for the rich supplies of pollen. A bee-keeper will plant early-flowering trees which will be in flower before the spring flowers, and give food for the comparatively barren months of March and April; hence the appropriateness of *sapces florem depasta satici* in *Ecl.* i. 54, willows being early to flower. Again, conifers are resinous, and are said to provide the propolis, (which is probably the meaning of *fucus* in *Georg.* iv. 38 and of *gluten* in 160), just as in 183 the *tilia* is called *pinguis* from the gluten on the leaves; and many of the other trees given in Columella's list are resinous. *Uberrima* may then be translated 'honey-laden.' *Tiliae* (lime-trees) are

mentioned, because bees are notoriously fond of them as supplying honey and propolis; pines are mentioned, because, besides these two advantages, they are early in flower. Virgil always writes carefully about bees and trees; Suetonius' memoir (§ 1) says that Virgil's father 'silvis coemendis atque apibus curandis auxisse reculam fertur.'

On March 4th a paper was read by Mr. Ross on some passages in Aristotle's *Metaphysics*. A 1071. a. 33—b. 2; l. 33, $\delta\delta$ may be defended as introducing (1) an explanation of $\delta\delta$ or (2) a limitation of $\tau\alpha\tau\alpha$. In l. 34 $\delta\delta$ is right, pointing forward to $\delta\delta\alpha\pi\epsilon\pi\tau\alpha\tau\alpha$ *ἀναιρέται* *ἀναιρόμενον* which explains it. $\delta\delta\tau\delta\pi\pi\tau\alpha\tau\alpha\tau\alpha\tau\alpha$ *ἐπτάτον* *ἐπτελεξελά* (*the primum movens*, opposed to the *πρώτον* *ἐν τῷ ἀνανθεῖ*, cf. *Eth.* iii. 1112. b. 23) sc. *αττίον* *πάντων*, is a third reason for saying the causes of all things are the same, the first being given in ll. 33—34, the second in ll. 34—35. But the word *πρώτον* leads Aristotle to mention *πρώτα* in another sense—proximate causes—which are different for different things. For the juxtaposition of the two senses cf. H. 1044. a. 16 with 18, and A 1070. b. 27 with 34, and for the meaning of $\delta\delta\tau\delta\pi\pi\tau\alpha\tau\alpha\tau\alpha$ cf. especially 1070. b. 34. *σοα τὰ ἀνανθα* is appropriate, since $\tau\delta\pi\pi\tau\alpha\tau\alpha\tau\alpha$ has no contrary (A 1075. b. 22). *τὰ ἀνανθα* are pairs of qualities related as *εἴδος* to *στρέψονται* and acting as mutual proximate causes. But we must not count as one the qualities which can be grouped under one generic or ambiguous term; we must count the individual instances separately, or else there would not be always different causes for different things.

1072. a. 32—b. 7; l. 34, read $\pi\omega\tau\delta\pi\pi\tau\alpha\tau\alpha$ b. 2. Christ's emendation *ἐνεκά καὶ τούτοις* must be right; it is confirmed by Averroes' quotation of Alexander (ed. Freudenthal). $\tau\delta\mu\epsilon\tau\delta\epsilon\tau\alpha\tau\alpha$ (*sc. ἐν τοῖς ἀκύρωτοις*) refers to *τούτοις*, $\tau\delta\delta\tau\delta\epsilon\tau\alpha\tau\alpha$ to *τούτοις*. L. 5, the MSS. all read *καὶ εὐρέπεια*, and it is not quite clear that Alexander omits it. $\tilde{\eta}\kappa\eta\epsilon\tau\alpha\tau\alpha$ must refer to what follows. Read *ωτ̄* *εἰ* $\tilde{\eta}\kappa\eta\epsilon\tau\alpha\tau\alpha$ (*subject*) $\tilde{\eta}\kappa\eta\epsilon\tau\alpha\tau\alpha$ *καὶ εὐρέπεια* (*predicate*) *τούτοις*, $\tilde{\eta}\kappa\eta\epsilon\tau\alpha\tau\alpha$ *ταῦτη γ' ἐνδέκεται* *ἄλλως* *τίχειν*, *κατὰ τόπον*. If the spatial motion of a thing is the primary spatial motion (the circular, and therefore the primary motion in general, for spatial motion is the primary motion), and is an *εὐρέπεια* (not a mere *γένεσις*, i.e. *κίνησις καὶ οὐσία*), the thing is contingent in that respect in which it is moved, i.e. in place, even if not in substance (i.e. even if it is eternal, as the *primum mobile* is).

1074. a. 12—14. The theories as to the number of spheres have just been stated as follows:—

	Eudoxus.	Calippus.	Aristotle adds counteracting spheres.	Total.
Saturn	4	4	4—1	7
Jupiter	4	4	4—1	7
Mars	4	5	5—1	9
Venus	4	5	5—1	9
Mercury	4	5	5—1	9
Sun	3	5	5—1	9
Moon	3	5	...	5
	26	33	+ 22 = 55	

'Not adding to the moon and to the sun the movements we have mentioned' would naturally mean deducting the four Calippus added, and the two sun-spheres which Aristotle added to counteract the two sun-spheres added by Calippus. This would reduce the total to forty-nine, not to forty-seven as is heretated. If Aristotle meant to deduct four counteracting spheres from the sun, he was giving up the principle of counteracting spheres, for two of Eudoxus'

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sun-spheres would remain uncounteracted and disturb the movement of the moon. Alexander makes three suggestions:—(1) that Aristotle forgets there are only two moon-spheres to be subtracted, (2) that he forgets there are only four sun-spheres to be subtracted, (3) that *λύνεα* is the true reading. *Simpl. on de Cœlo* 503. 10—504. 3 adds nothing valuable. Schw. and Bon, accept Krische's view that the movements to be deducted are the eight reverse movements of Mercury and the sun which prevent their forward movements from affecting the sun and the moon respectively. K. thinks these might be omitted because of the great distance of the sun and moon from the planets and from each other. But (1) the last point is wrong, for the spheres touch one another. *Meteor.* 340. b. 10, 341. a. 2; *de Cœlo* 287. a. 5, (2) the reverse spheres of Mercury and the sun were not added to the sun and the moon, though for their good, (3) K. ignores *de Cœlo* 291. b. 35 δέδρους γὰρ ἥλιος καὶ σελήνη κινούνται κινήσεις ἡ τῶν πλανητῶν δύοτρον ἔνα. On K.'s view only reverse movements have to be deducted; the sun and the moon would still have five movements each, which is not fewer than the number of movements of any of the planets; for five is the largest number assigned to any of the planets in the theory either of Eudoxus or of Calippus. If the total number of movements (backward and forward) assigned to the sun and the moon is, as A tells us, to be reduced from fourteen to six, and if the sun and the moon are each to have less than five, either one must have four and the other two, or each must have three. No known theory agrees with the former alternative, while that of Eudoxus agrees exactly with the latter. Aristotle, then, goes back to the Eudoxean theory, subtracting—just as his words suggest—all the additions made by Calippus and himself in respect of the sun and the moon. This coincides with Alexander's second interpretation. His third interpretation is tempting; but ἔττι goes back to the time of Sosigenes (50 B.C.) and ἔννεα still leaves the main difficulty—why Aristotle should give up the additions made by himself and Calippus. We have no light on this: but, in view of the obvious differences between the sun and moon and the planets, it is not surprising that Aristotle should have abandoned, with regard to the former, a theory which he accepted with regard to the latter. If our view is correct, Aristotle might have said in *de Cœlo* that the sun and the moon have fewer motions than any of the planets; but his point is that the movements do not become regularly more complex as one passes from the *primum mobile* inwards to the earth.

On March 11th a paper was read by Mr. LOUIS DYER on 'Early Relations between Arcadia and Olympia.' The Peloponnesian war ultimately revolutionised these relations, but not until the foundation of Megalopolis, the forcible occupation of Olympia, and the celebration of the games by Arcadians in 364 B.C., known as the An-olympiad. Recent labours on Olympian inscriptions, on the Oxyrhynchus list of victors from Ol. 75-83 (Robert), and on cc. i.-xviii of Paus. vi. (W. Hyde), enabled the writer to draw a sharp line at the Anolympiad, before which Arcadians and Eleans indiscriminately, and as one community, achieved the highest standard in athletics. Pausanias catalogued 188-odd victors. Of these 168 were approximately dated; and only one Arcadian among them came after 364 B.C., and he won in 360 B.C. He was of Lepreum, which must count as Arcadian. No inscription records an Arcadian victor after the Anolympiad, though Arcadian local games flourished until at least 200

B.C. From 168 dated victors, subtract 65 who come after the Anolympiad, and 103 remain, 52 for all other parts of the Greek world, while 51 are left who came from Arcadia and Elis. Of these 30 are Arcadians and 21 Eleans. This doubtless resulted partly from the superior numbers of the Arcadians, but chiefly from their superior athletics, which in turn depended on their highly developed local games and their easier access to the Nemean and Pythian games, as well as on the exclusion of Eleans from the Isthmia. Xenias in Cyrus's 10,000 showed the Arcadian devotion to games, and Lycomedes's boast as to Arcadian bodily vigour had a sound basis in fact. Local Arcadian games, unsupplied until the foundation of Megalopolis with Stadia and Hippodromes, were plainly little more than a training ground for the metropolitan contests at Olympia. The Eleans so greatly excelled in *savoir faire*, that, under great provocation, the Spartans continued them as overseers of the games, judging the rival claimants as incompetent *χωρίτα* (Xen. *Hell.* III. ii. 31). Arcadians won no chariot-races, and excelled chiefly in boxing and wrestling, not in the pentathlon. Their boy victors were proportionately more numerous than the Eleans', perhaps because grown up Arcadians went forth as mercenaries.

In the matter of the sculptors chosen to make statues of Arcadian and Elean victors, indications of a common taste are not lacking. Barring scattered choices, we find nine Eleans and seven Arcadians falling upon four sculptors, all from Sicyon, obviously nearer to Arcadia than to Elis. Close scrutiny of dates indicates that Arcadians took the initiative in choosing sculptors, and were followed by Eleans. Arcadians introduced Sicyonian sculptors, patronised by them and Eleans just when the Sicyonian treasury was built at Olympia. Arcadians at an earlier time introduced Pythagoras of Rhegium and Nicodamus of Maenaeus to the notice and patronage of all Greece. After their withdrawal from Olympia there was a collapse of good taste. This is suggested by shoals of monuments of degenerate taste that met Pausanias' eye at the end of his first, and throughout his second, round among victors' statues. These, with few exceptions, were set up after the Anolympiad, and their grouping suggests a survival in the mind of the Eleans of the notion that Elis and Arcadia were still the 'home-counties' of the games, and perhaps an expectation of future Arcadian victors. Before the Anolympiad, at all events, the grouping of victors' statues is a record of long comradeship between Arcadians and Eleans. It was Arcadia and Elis against the world. Arcadians and Eleans were grouped together, and always in the best places. The three groups east of the front of the Great Temple of Zeus contained 35 Arcado-Eleans, a group presumably near the Great Ashen-Altar contained 3, and the group south of the Heraeum 6.

Further evidence that for social and religious purposes the Eleans and Arcadians often figure as one people, is found in Xenophon's and Plutarch's casual allusion to individual Eleans as Arcadian (*Anab.* VI. iv. 10, *De Fraterno Amore* p. 479 n), in Thucydides's (I. 10) subdivision of the Peloponnesus, alluded to by Pausanias at the beginning of Book V, as well as in Pindar's Sixth Olympian Ode. This is further emphasised by the known facts about Elean and Arcadian coinage, and by Pausanias's unsuccessful, though repeated attempts to indicate the boundary between Elis and Arcadia. The boundary between Heraea and Pisatis he knows as a cantonal boundary, but nevertheless puts the whole district of Pholoe into Arcadia, and places Mt. Lapithas there also, in

spite of giving the river Diagon as the limit of southern Pisatis eastward. Only by reading *Φυγλας*,—not known as a topographical designation,—for *Ποταμος* in a puzzling passage can Blümner and Hitzig disguise the fact, recognised in the index to Teubner's text, that Pausanias regards Pholeos as an Arcadian mountain, although it is in Elis, just as he looks upon Mt. Lapithas as Arcadian, although

west of the river Diagon. The testimony of legends here is overwhelming, and to this may be added, for the earliest times, that of deep-level Olympian excavations. These must have come from an area including at least the whole region watered by the Alpheus and all its tributaries.

A. H. J. GREENIDGE.
Hon. Sec.

ARCHAEOLOGY.

SAUER'S LABORDE HEAD AND PARTHENON PEDIMENTS.

Der Weber-Laborde'sche Kopf, und die Giebelgruppen des Parthenon. B. SAUER. Berlin: Reimer, 1903. Pp. 117. Three plates, eight cuts. 5 mk.

THE head belonging to the Comte de Laborde has long been familiar in cast and photograph to all interested in the Parthenon. It was brought in the time of Morosini from Athens to Venice by a member of the Sangallo family, and identified at Venice by Weber in 1823 as belonging to the Parthenon Pediments. Prof. Sauer, who has done very valuable work already in his exact and detailed examination of the floor and background of the Pediments as they exist *in situ*, has submitted the Laborde head to a long and serious course of research. The results are striking. He shews that the head has been twice restored in plaster, first by Ferrari and then by Simart. The lower part of the forehead, the whole of the nose and mouth, and the front part of the chin are modern. So much a trained eye can easily discern from a careful examination of the plaster casts of the head, though certain French archaeologists are most unwilling to allow that the profile is a modern creation. But Dr. Sauer made a further discovery, by the help of old casts preserved at Giessen and Dresden. Every one who has studied it must have observed how impossibly deep the head is from front to back. This turns out to be the fault of Simart, who finding the back of the head damaged and part of the top indented, added plaster at the back and top to a depth of 1 to 2 centimetres, say three-quarters of an inch. The restoration of the face was perhaps legitimate, but the distortion of the whole form of the head was unjustifiable.

Taking his discovery as a starting point, Prof. Sauer has certainly used it for all it is worth, perhaps for somewhat more, though

one must always forgive the ardour of the man who uncovers a new fact. He seeks in an exhaustive investigation to prove that the slight recessing of part of the top of the head proves exactly how it must have stood in relation to the cornice of the pediment; and further that it must be assigned, not to the Western Pediment, but to the central portion of the Eastern, which has disappeared ages ago, all but three or four fragments. Prof. Sauer tries to support with fresh arguments the restoration of the East Pediment which he proposed in 1891, but which has not met with the general acceptance of which, not unnaturally, its originator had thought it worthy. He also makes a contribution to the West Pediment in the form of a newly identified foot, which he attributes to the male figure seated on the lap of mother or nurse.

The facts as to the Laborde head with which Prof. Sauer sets out seem clear and certain. For these at least we owe him gratitude. His tendency to get out of facts more conclusions than they will warrant appeared in his work on the Theseum. In dealing with the Parthenon Pediments he is on safer ground: and his method, even if carried to excess, is far preferable to the arguments from one's subjective notions of fitnesses and probabilities which have played so great a part in some reconstructions and interpretations of the sculptures of the Parthenon.

P. GARDNER.

WALTER'S GREEK ART.

Greek Art. By H. B. WALTERS. (Little Books on Art) Methuen & Co. 1904. Pp. x, 242. 40 illustrations. 2s. 6d. net.

'It is easier to criticize than to execute,' wrote Xeuxis over one of his pictures, and Mr. H. B. Walters might well have prefixed the quotation to the volume on

Greek Art which he has contributed to the 'Little Books on Art' series. Certainly the general editor shewed great courage in inviting him to write a history of Greek Art in (approximately) 42,000 words, but he shewed even greater courage in accepting the invitation. To a person totally ignorant of the subject the task might not present difficulties, but Mr. Walters is an expert in at least three important branches of Greek Archaeology, and he must have spent anxious days and sleepless nights in trying to bring his stores of knowledge within the limits enjoined by the series. We have heard of the 'Tyranny of Tears,' but what is that to 'the Tyranny of the Series'? Forty-two thousand words are enough for a treatise on 'Enamels,' or 'Christian Symbolism,' or the work of a single painter, and therefore an author, whose subject includes the development of sculpture, painting, metal-work, architecture, and gem engraving during 450 years, is expected to confine himself within the same limits! 'Which is absurd.'

Mr. Walters goes a long way towards proving the falsity of the axiom that 'the less cannot contain the greater': his book contains a great deal more information than could reasonably be expected. After a short introductory sketch of the beginnings of Greek Art, he treats his subject in sections, dealing with each branch of it in turn by choosing in it a few salient points for discussion and illustration. Of these he writes pleasantly with a due regard to the unavoidable limitations of his readers. The chapters devoted to the minor arts are the most satisfying because as there is less to say about them than about sculpture a more complete view of each can be given in such a limited space.

On one point only is it possible to quarrel with the arrangement of the book:—the chapter on *Architecture* (v) might with advantage have preceded those on *Sculpture*, (ii, iii, iv), for in the latter a great deal of space is devoted (and rightly) to sculpture employed decoratively in Greek temples, and some of the terms used in describing its position will be unintelligible to the average reader, who may possibly know that the 'pediment' of a Greek temple is a 'gable-end,' but is certainly ignorant of the technical meaning of the terms 'metope' and 'cella,' used in discussing the Parthenon and other sculptures (page 65), whereas if the chapter on Architecture had come first the meaning of these terms and of many others would be quite clear. A side eleva-

tion of a Greek temple shewing the main differences between the Doric and Ionic styles would have been a welcome addition to the plans with which this chapter (v) is enriched, even if it had involved the omission of the ground plans of 'decastyle-dipteral,' or 'pseudo-peripteral' temples (p. 105).

All museum visitors will be grateful to Mr. Walters for including, in his chapter on vase-painting (vii), outline drawings of seventeen of the principal vase shapes with their Greek names, and readers who take the trouble to master the information in this chapter will be rewarded by thoroughly enjoying their next visit to the British Museum galleries, instead of being utterly bored by the vases which they will have learnt not to call 'Etruscan' (page 139).

Later chapters deal in the same careful way with bronzes, terra-cottas, gems, and coins, all well illustrated by an admirably selected series of plates, mostly from objects in the British Museum. Many readers would undoubtedly have liked to see a representation of the Mycenaean lady in the 'elaborately flounced and to all appearance divided skirt of the period' (page 209).

May not this horror merely be an 'artistic rendering' of the tendency of all full skirts, especially when flounced, to fall in between the knees? The Academy critic of *The Tailor* has dreadful tales to tell of sartorial atrocities perpetrated by artists, in rendering their sitters' clothes, and as the last porcelain figures found by Mr. Evans in Crete (a priestess or votary with serpents) do not shew this peculiar falling-in of the skirt, it would be only kind to give the Mycenaean ladies the benefit of the doubt.

Mr. Walters has added to his book a very useful 'Chronological Scheme of Greek Art,' and a carefully compiled index, both of which will be much appreciated by his readers. The book itself, which is well printed and prettily got up, with its forty monochrome plates, is a marvel of cheapness at half-a-crown.

C. A. HUTTON.

TALFOURD ELY'S *ROMAN HAYLING*.

Roman Hayling. A contribution to the History of Roman Britain by TALFOURD ELY, D.Lit., M.A. (Lond.), F.S.A. With Plan and Illustrations. London: Taylor and Francis, 1904. 5s. net.

THIS dissertation deals with the results of excavations carried on in Hayling Island

by Mr. Talfourd Ely since 1897, in which he has had the distinction of having wielded both the spade (single-handed) and the pen. Remains of a large Roman settlement were discovered. The finding of a *dupondius* of Domitian (struck in 95), which looks almost as if it had come fresh from the mint, leads Mr. Talfourd Ely to connect the settlement with Vespasian's operations in the Isle of Wight at the time of Plautius' invasion. He would date the building about 45 after Christ or a few years later. The discovery of an early Roman settlement on Hayling Island is of considerable interest, though the connection with Vespasian's campaign is only a possibility.

F. H. M.

MONTHLY RECORD.

GREECE.

Crete.—Mr. Arthur Evans telegraphs that on a headland north of Knossos he has unearthed the remains of a great stone mausoleum. It is in the form of a square chamber, rising to a lofty gable, with arched entrance passage. In one corner, below the floor, was found a cist grave. Though nearly all the metal objects had been removed in ancient times, several relics of various kinds were found, including clay impressions of a royal signet, painted jars in fine palace style, a carved stone lamp with crystal pommel, an Egyptian basalt bowl, many alabastra, and an Egyptian necklace of lapis lazuli with pendent figures. Mr. Evans thinks that the grave was that of one of the last Minoan kings.¹

ITALY.

Pitigliano (S. Etruria).—Numerous vases have been discovered in Etruscan tombs. Of the *bucchero nero* the most noteworthy is a vase decorated on the handles with female heads in relief, and on the body with a frieze of animals, twice repeated. An oenochoe of orientalizing style is adorned with palmettes and lotus flowers. A rude model of a two-horsed chariot in terracotta was found in one of the tombs together with vases of the same type as the foregoing. Attic black-figured vases were also present, the most interesting being a *kylix* decorated with eyes and figures of Silenos. From another tomb came a seated Egyptian figure in porcelain. The tombs are of the 6th century B.C.

¹ *Times*, April 27th.

² *Notizie degli Scavi*, 1903, part 7.

Sulmona (Paeligni).—A head of veined marble has been found in course of demolishing a wall on the *Via Pelinga*. It is about 8½ in. high, and appears to be a good copy of a Greek ideal head, perhaps representing Apollo.²

Bolsena.—Excavations carried on since 1901 in the neighbourhood of the Roman city have led to the discovery of numerous sculptures, architectural fragments, and inscriptions, mostly of the 2nd and 3rd centuries after Christ. Remains of pre-Roman walls, however, make it probable that the Roman *Bolsena* was built on the site of an old Etruscan settlement.³

SARDINIA.

Fordongianus (Forum Traiani).—A preliminary excavation of the *thermae* shows that enough remains to give an idea of their general structure and arrangement. Further excavation would probably lead to the discovery of much interesting epigraphical material. Two statuettes in trachyte which have been found are curious. The one is a caricature of a male figure with exaggerated trunk and feet and very short legs; he wears a loin cloth and has a snake twined round his l. arm. The second statuette lacks the extremities of the hands and feet, but has the head preserved. It is about 3 ft. high, and represents a similar grotesque figure, with some differences of detail. Possibly the serpent has some reference to the healing properties of the warm springs. Perhaps, too, we can trace Carthaginian influence in these monstrous figures, though they are probably of Roman date.⁴

Near *Fordongianus* a tomb was recently discovered containing (1) A pear-shaped glass vase, (2) two gold rings, (3) a necklace of porcelain, white glass, amber, and carnelian beads, (4) a bronze bracelet, (5) a bronze key with ring, and (6) a denarius of Q. Pompeius Rufus (58 B.C.).⁴

SICILY.

Camarina.—Excavations in 1902 and 1903 led to the discovery of several tombs, chiefly of a very poor class. Most of them belong to the second half of the 5th or first half of the 4th century B.C. A few are as late as the first half of the 3rd century. None of the vases found are remarkable for their designs, but they are in a good state of preservation. They include ten large cratera with red-figure designs. The bronzes found

¹ *Ibid.* part 8.

² *Ibid.* part 9.

are poor, consisting of several strigils and one mirror.³

Gela.—A bronze patera, decorated with nine figures of horses and asses, and with a flower in the centre has been found on a farm near Gela. It is an imitation of the well-known Phoenician paterae, but is probably of Greek workmanship. Date, 7th–6th century B.C.³

Grammichele.—Beneath the foundations of a square building a number of noteworthy objects have been found. Unfortunately they have suffered from unskillful excavation. The principal finds are (1) an archaic terracotta statuette of a seated woman (second half of 6th century), (2) a male marble torso of good execution, perhaps an Apollo, of about the same date, (3) a male head of local limestone, bearded, (4) many fragments of black-figured vases, and (5) three amphorae and two alabastra of glass. Apparently these objects are the remains of an archaic temple treasure.³

Syracuse.—To the W. of Lysimelia a deposit of terracottas has been found, consisting in the main of female heads of the Hellenistic period. Near this same place two archaic tombs have been excavated. The first contained a cinerary *lebes* and many vases, of which the most interesting is an alabastron with pointed base. It is covered with enamel and is probably of Phoenician workmanship (7th–6th century B.C.). Cf. Perrot et Chipiez, iii. p. 732, Pl. vi. 2. In the other tomb was a large crater with volute handles and wide mouth. Below the rim is a black-figure design, divided into two parts; on both are represented a combat of two warriors, and warriors departing in their chariots. There is variation of detail. The vase belongs to the second period of Attic b.-f. vases (about 500 B.C.).⁴

F. H. MARSHALL.

NUMISMATIC SUMMARIES.

Numismatic Chronicle, 1904. Part 1.

Sir H. Howorth, 'Some coins attributed to Babylon by Dr. Imhoof-Blumer.' On certain coins bearing the name of the Satrap Mazaios, also double-darics, &c. Howorth contends that it is *a priori* unlikely on historical grounds that Alexander the Great would have permitted his satrap to strike coins at Babylon with his (Mazaios's) name, nor is it likely that Alexander would have continued the issue of

³ *Notizie degli Scavi*, part 8.

⁴ *Ibid.* part 9.

the daric archer-type at Babylon. The coins are criticized in detail, and the writer considers that they were not minted at Babylon, but 'somewhere on the southern sea-board of Asia Minor or in Syria.'—J. G. C. Anderson. On the Era of Sebastopolis in Pontus, dating from B.C. 3, autumn. Also on the Era of Comana in Pontus which had been approximately ascertained to begin A.D. 34 or 35. Anderson shows from an inscription that it began in A.D. 34.

Jahresheft des österreichischen archäol. Institutes. Bd. VII (1904) contains an interesting numismatic paper by Dr. B. Pick, 'Die Tempeltragenden Gottheiten und die Darstellung der Neokorai auf den Münzen.' It deals with the type of a figure—usually the city-goddess—holding a small temple, like Saints and Donors in mediaeval art. The earliest representations occur under Domitian, and with the exception of two towns in Thrace, the type is confined to Asia Minor (Smyrna, Lesbos, Nicomedia, Tarsus, Side, etc.). A mention of the Neokorai generally occurs in the accompanying inscription and the temple of which a model or a reproduction is shown is usually the temple built by the coin-issuing town in honour of the Emperor. These types as treated by Pick throw some welcome light on the Neokorai question at various cities.

With regard to the types of Greek Imperial coins generally, Pick suggests a classification that may prove a useful clue through an intricate maze as yet but incompletely explored by numismatists. (i) Conventional types common to the whole Graeco-Roman world (e.g. Tyche, Asklepios). (ii) Types of local significance, usually reproductions of a cultus-statue. (iii) Types commemorating some historical event, e.g. the building of a temple in honour of the Emperor, as on the coins discussed in this paper.

Zeitschrift für Numismatik. 1904. Parts 3 and 4.

H. Gaebler, 'Zur Münzkunde Makedoniens.' This is the fourth of Dr. Gaebler's valuable series of articles on Macedonian numismatics, and deals with the Imperial period (pp. 245–338: a second part to follow). The coins principally discussed are those issued under the authority of the *Kourby Maceōdōvōv* the diet of the Province which was presided over by an *ἀρχιερέψ* and the functions of which were chiefly religious and connected with the provincial cultus of the Emperor and the celebration of the Games. Many of the types relate to Alexander the Great. The article also contains a great deal of learned matter—which might, perhaps, have appeared more conveniently in a separate monograph—on the early history of the Neokorai, at Ephesus, Smyrna, Pergamum, etc.—R. Zahn, 'Siegerkrone auf einer Tonlampe.' An object on Greek Imperial coins usually described as a prize-urn (awarded to victors in the games) has been lately shown by Dr. Dressel to be probably a ceremonial head-dress assumed by victorious athletes. (Dr. Pick in the article summarized above, considers that the prize-urn as well as the head-dress is to be found on the coins.) This object occurs on the terracotta lamp here described (Berlin Mus., of third century A.D.).—*Obituaries*. Th. Mommsen by H. Dressel. Ulrich Köhler by R. Weil.—*Bibliography of Greek and Roman Numismatics* by K. Regling. The first part (57 pages, covering the years 1901 and 1902) of a most acceptable work.

WARRICK WROTH.

SUMMARIES OF PERIODICALS.

Wochenschrift für Klassische Philologie.
1904.

2 Mar. *Orientis Graeci inscriptiones selectae*. Supplementum Syloge Inscr. Graec. ed. W. Dittenberger. I. (W. Larfeld), very favourable. *Demetrius on Style*. The Greek text edited by W. Rhys Roberts (H. v. Arnim) II. 'For Germany this edition compares unfavourably with Radernacher's.' A. Dieterich, *Eine Mithrasliturgie* (R. Asmus), favourable.

9 Mar. *Vorläufiger Bericht über eine archäologische Expedition nach Kleinasien*, von J. Jüthner, Fr. Knoll, K. Partsch und H. Swoboda. *Studia Pontica I. A journey of exploration in Pontus*, by J. G. C. Anderson. Murray's Handy classical maps, *Asia Minor*, ed. J. G. C. Anderson (G. Lang), favourable. V. Ussani, *Sul valore storico del poema lucaneo* (J. Ziehen), very favourable. C. Brakman, *Frontoniana* (C. W.), unfavourable. A. Bechtel, *Sanctae Silvae Peregrinatio*. The text and a study of the Latinity (C. W.). C. Hesseling, *Les mots maritimes empruntés par le Grec aux langues romanes* (G. Wartenberg).

16 Mar. F. H. M. Blaydes, *Spicilegium Sophicum*. Not without value. Fr. Kaehler, *Forchungen zur Pytheas' Nordlandreisen* (Fr. Matthias), favourable. *Ciceronis epistulae*. II. *Epistulae ad Atticum*, rec. C. Purser (W. Sternkopf), favourable. G. Riedner, *Typische Äußerungen der römischen Dichter über ihre Begabung* (K. P. Schulze), favourable. *Florilegium patristicum*, digessit G. Rauschen. I. *Monumenta avii apostolici* (J. Dräseke), very favourable. A. Huemer, *De Ponti Meropit Paulini Nolani re metria* (C. W.), favourable.

23 Mar. H. Francotte, *L'administration financière des cités grecques* (Fr. Cauer), very favourable. *Caroli Lévéque libellum aureum de Plutarcho mentis medico denuo edendum cur*. J. J. Hartman (Th. Eisele), favourable. E. Vitano, *De Culicis auctore* (J. Ziehen). 'A useful contribution.' C. Synderberg, *Randbemerkungen zu Minucius Felix*, II. (Boenig), favourable.

30 Mar. E. Drexup, *Homer Die Anfänge der hellenischen Kultur* (A. Höck), very favourable. A.

Oddo, *Pisistrato* (Fr. Cauer). *Horatius*, von O. Keller und J. Häussner, 3. Aufl. Th. Fritzsche, *Die Wiederholungen bei Horaz* (K. P. Schulze), favourable. *Georgii Acropolitae opera* rec. A. Heisenberg. II. (J. Dräseke), very favourable.

6 Apr. S. Eitrem, *Die göttlichen Zwillinge bei den Griechen* (H. Steuding). 'The combinations are uncertain.' *Demoskenis orationes*, rec. S. H. Butcher, I. (P. Uhle), very favourable. A. Mau, *Führer durch Pompeji*. 4. Aufl. (Gillischecki), very favourable. Kottmann, *De elocutione L. Junii Moderati Columellae* (W. Gemoll), favourable. P. Lejay, *Lexicographie latine* (P.). *Vocabularium iurisprudentiae Romanae iussu Instituti Savignianum compositum*. Fasc. IV. (W. Kalb).

13 Apr. E. Capps, *The introduction of comedy into the City Dionysia* (A. Körte), favourable. L. Pollak, *Klassisch-antike Goldschmiedearbeiten in Besitz A. J. von Nolidae* (W. Ameling). *Demosthenes, Ausgewählte Reden*, von A. Westermann. 2 Bändchen, 7. Aufl. von E. Rosenberg (P. Uhle), 'Much to be commended.' C. Hubert, *De Plutarchi Amatorio* (W. Nachstädt), favourable. M. von Schwindt, *Philostriatische Gemälde*, herausg. von R. Förster (Fr. Spiro). 'A very artistic gift.' R. S. Radford, *Use of the suffixes -anus and -anus in forming possessive adjectives from names of persons* (A. Zimmermann), favourable.

20 Apr. C. Wachsmuth, *Athen* (W. Dürpfeld), favourable. F. Wipprecht, *Zur Entwicklung der rationalistischen Mythendeutung bei den Griechen*, I. (H. Steuding), unfavourable. W. Christ, *Die überlieferte Auswahl theokritischer Gedichte* (K. Kunst), favourable. *Beiträge zur Klassischen Philologie*, A. Schöne dargebracht. Four articles (1) *De Cicerone et Torguato Epicureo* by J. Klausen, (2) on *Juv.* vii. 40 foll., (3) *Deuterostokopie bei Homer*, (4) *Bemerkungen zur Ciris*. The last three are by G. Wörpel.

27 Apr. *Euripide Electre*, par H. Weil, 3. éd. (K. Busche). S. Zebele, 'Axaxá' (B. Bursy), favourable. L. Smichotta, *De vocum Graecarum apud poetas Latinos dactylicos ab Enni usque ad Ovidi tempora usu* (J. Tolkiehn). 'Careful and well written.'

ADDENDUM TO P. 241.

Aesch. *Supp.* 568 On *νόοις ζθοκτον* Stanley had already noted: 'Porro hodie in Aegyptia metropoli Caire ad primum incrementi Niliaci momentum subsidit Pestilentia. Nemo tum moritur, licet pridie quingenit.' W. H.